

# Accounting Department

## DEGREES:

Accounting (AS)

## CERTIFICATES OF ACHIEVEMENT:

Accounting

## JOB-DIRECT LOW UNIT CERTIFICATES:

Account Clerk

## COURSES:

ACCT (Accounting)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

**Faculty Contact:** Erica Beam



## P.A.C.E. - BUSINESS AND MANAGEMENT - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to influence, lead or manage to reach your personal or organizational goals and/or economic gain?
- ...enjoys facts, numbers, and details?
- ...likes to carry out tasks in detail or to follow through on other's instructions?
- ...is interested in learning about how to turn your ideas into a sustainable business?

# Accounting

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## Accounting

*Certificate of Achievement and Associate in Science*

### Program Description

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

The Certificate of Achievement can be obtained upon completion of the 29-unit major with a minimum grade of C in each course. The Associate in Science can be obtained by completing the 29-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 earn the Accounting Associate in Science will be able to:

1. Demonstrate the use of the accounting cycle to prepare the income statement, statement of owner's equity, and balance sheet while applying the generally accepted accounting principles and concepts.
2. Analyze and evaluate managerial decisions using basic managerial accounting concepts and theory.

Students who earn the Accounting Certificate of Achievement will be able to:

1. Demonstrate the use of the accounting cycle to prepare the income statement, statement of owner's equity, and balance sheet while applying the generally accepted accounting principles and concepts.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
ACCT 001 Principles of Accounting - Financial.....	4
ACCT 002 Principles of Accounting - Managerial.....	4
ACCT 050 Computer Accounting .....	3
ACCT 176 Intermediate Accounting .....	3
ACCT 177 Cost Accounting .....	3
ACCT 183 Principles of Income Tax.....	3
CIS 001 Introduction to Computer Science .....	3
or	
CIS 050 Microcomputer Applications .....	3
CIS 066 Microsoft Word.....	3
CIS 073 Microsoft Excel .....	3
<b>Required Major Total units</b> .....	<b>29</b>

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Accounting."

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## Account Clerk

*Job-Direct Low Unit Certificate*

<b>REQUIRED COURSES</b> .....	<b>Units</b>
ACCT 001 Principals of Accounting-Financial .....	4
BUS 097 Work Readiness.....	1.5
CIS 073 Microsoft Excel .....	3
OT 162 Ten-Key.....	1
<b>Total units</b> .....	<b>9.5</b>

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# Advanced Manufacturing Department

## DEGREES:

Automation Technology (AS)  
Mechatronics (AS)

## CERTIFICATES OF ACHIEVEMENT:

Automation Technology  
Maintenance Technician  
Mechatronics

## COURSES:

IT (Industrial Technology)

MT (Maintenance Technology)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

**Faculty Contact:** Douglas Green



**P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

# Advanced Manufacturing

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## Automation Technology

*Certificate of Achievement and Associate in Science*

### 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.

The Certificate of Achievement can be obtained upon completion of the 27-28-unit major. The Associate in Science can be obtained by completing the 27-28-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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

Students who complete the Automation Technology Certificate of Achievement/Associate in Science will be able to:

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

<b>REQUIRED COURSES</b> .....	<b>Units</b>
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
<b>Required Major Total Units.....</b>	<b>27-28</b>

<b>Electronics List: (select one course)</b> .....	<b>Units</b>
MT 121 Electronics .....	4
MT 122 Principles of Digital Electronics .....	3
<b>Elective List (select three units)</b> .....	<b>Units</b>
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

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Automation Technology."

# Advanced Manufacturing

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## Maintenance Technician

*Certificate of Achievement*

### Program Description

The Maintenance Technician program 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.

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

Students who complete the Maintenance Technician Certificate of Achievement will be able to:

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 systemstanding of electrical systems and devices related to manufacturing and automation systems

<b>REQUIRED COURSES</b> .....	<b>Units</b>
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
<b>Required Major Total Units</b> .....	<b>18</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Maintenance Technician."

# Advanced Manufacturing

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## Mechatronics

*Certificate of Achievement and Associate in Science*

### 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

The Certificate of Achievement can be obtained upon completion of the 36-37-unit major. The Associate in Science can be obtained by completing the 36-37-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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

Students who complete the Mechatronics Certificate of Achievement/Associate in Science 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

<b>REQUIRED COURSES</b> .....	<b>Units</b>
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 List A.....	6
<b>Required Major Total Units.....</b>	<b>36-37</b>

<b>Electronics List: (select one course)</b> .....	<b>Units</b>
MT 120 Principles of Analog Electronics .....	3
MT 121 Electronics .....	4
MT 122 Principles of Digital Electronics .....	3
<b>List A: (select 6 units)</b> .....	<b>Units</b>
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

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Mechatronics."

# Aeronautics Department

## DEGREES:

Airframe Maintenance Technician (AS)  
Powerplant Maintenance Technician (AS)  
Airframe & Powerplant Maintenance  
Technician (AS)

## CERTIFICATES OF ACHIEVEMENT:

Airframe Maintenance Technician  
Powerplant Maintenance Technician  
Airframe & Powerplant Maintenance  
Technician

## COURSES:

AERO (Aeronautics)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

**Faculty Contact:**

Brooks "Rusty" Mayes

Kevin Spoelstra



**P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

# Aeronautics

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## Airframe and Powerplant Maintenance Technician

*Certificates of Achievement and Associates in Science*

### Program Description

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

A focused Airframe or Powerplant Certificate of Achievement can be obtained upon completion of the corresponding 41-unit major. A focused Airframe or Powerplant Associate in Science can be obtained upon completion of the corresponding 41-unit major, General Education, and electives as needed to complete a minimum of 60 units.

The combination Airframe & Powerplant Maintenance Technician Certificate of Achievement can be obtained upon completion of the 62-unit Airframe and Powerplant Maintenance major. The combination Associate in Science can be obtained upon completion of the 62-unit Airframe and Powerplant Maintenance major and General Education.

The Federal Aviation administration (FAA) requires 1150 hours (four full semesters) of instruction to complete either the Airframe Maintenance curriculum or Powerplant Maintenance Curriculum (An additional 750 hours, two full semesters for the Combination of Airframe and Powerplant Maintenance Curriculum). 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 Airframe Maintenance Technician, Powerplant Maintenance Technician or Airframe & Powerplant Maintenance Technician Certificate of Achievement or Associate in Science will be able to:

1. Demonstrate proficient, entry-level aviation maintenance skills in airframe, powerplant, or airframe and powerplant with emphasis on aircraft engines, aircraft structures, and aircraft systems.
2. Have a working knowledge to inspect, maintain, service and repair aircraft electrical, engine (piston and turbine), airframe structure, flight control, hydraulic, pneumatic, fuel, navigation and instrument systems and other aircraft components specified by Federal Aviation Regulation Part 147.
3. Obtain the knowledge and skills to pass oral, practical and written Federal Aviation Administration (FAA) examination in general and airframe/powerplant subjects.

<b>AIRFRAME REQUIRED COURSES</b> .....	<b>Units</b>
AERO 102 Aviation Maintenance Technician - Airframe Structures.....	10
AERO 105 Aviation Maintenance Technician - Airframe Systems .....	10
AERO 118 Aviation Maintenance Technician - FAA Airframe Test Preparation .....	1
General Required Courses .....	20
<b>Required Major Total units</b> .....	<b>41</b>

<b>POWERPLANT REQUIRED COURSES</b>	
AERO 106 Aviation Maintenance Technician - Powerplant Reciprocating Engines .....	10
AERO 107 Aviation Maintenance Technician - Powerplant Turbine Engines .....	10
AERO 119 Aviation Maintenance Technician - FAA Powerplant Test Preparation.....	1
General Required Courses .....	20
<b>Required Major Total units</b> .....	<b>41</b>

<b>GENERAL REQUIRED COURSES</b> .....	<b>Units</b>
AERO 055 Aviation Maintenance Technician - General Aircraft Subjects .....	10
AERO 103 Aviation Maintenance Technician - Basic Electricity and Hydraulics .....	10

<b>AIRFRAME AND POWERPLANT REQUIRED COURSES</b> .....	<b>Units</b>
Complete all courses .....	62

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

# American Sign Language Department

## DEGREE

ASL/English Interpreter Training (AA)

## CERTIFICATE OF ACHIEVMENT

ASL/English Interpreter Training

## COURSES:

[ASL \(American Sign Language\)](#)

## CONTACT INFORMATION:

School of Liberal Arts

**Building:** 1300 **Room** 1307B

**Phone Number:** (707) 864-7250

**Fax Number:** (707) 646-2072

**Dean:** Neil Glines

### Administrative Assistants:

Leigh Anne Jones

Donna Meyer

### Faculty Contact:

Hui Hui "Gwen" Gallagher



## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

## P.A.C.E. - VISUAL, PERFORMANCE, AND LANGUAGE ARTS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to express yourself creatively and using imagination or intuition?
- ...enjoys feeling free to be inventive without limits?
- ...likes to inform, enlighten, help, or teach, using your skills with words and physicality to serve people?
- ...is interested in self-expression and thinking critically on the world in which we live?

# American Sign Language

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## ASL/English Interpreter Training

*Certificate of Achievement and Associate in Arts*

### Program Description

The ASL program provides a foundation of interpreting skills for students seeking to transfer to a four-year institution in order to become an interpreter. The coursework presents American Sign Language in a cross-cultural context, addressing the ethics and standards expected of a professional interpreter.

The Certificate of Achievement can be obtained upon successful completion of the 27-unit major. The Associate in Arts can be obtained upon completion of the major, General Education, and electives as needed to complete a minimum of 60 units. 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 ASL/English Interpreter Training Certificate of Achievement/Associate in Arts will be able to:

1. Sign effectively, using appropriate skills, in working with the Deaf and Hard of Hearing.
2. Demonstrate an understanding of Deaf culture, and the ethics and standards of professional ASL environment.

### REQUIRED COURSES.....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

OCED 090 Occupational Work Experience ..... 1

**Required Major Total Units .....27**

This program is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "ASL/English Interpreter Training."

# Anthropology Department

## DEGREES:

Anthropology (AA-T)

## COURSES:

ANTH (Anthropology)

## CONTACT INFORMATION:

School of Social and Behavioral Sciences

**Building:** 700 Room 729

**Phone Number:** (707) 864-7000 x7251

**Fax Number:** (707) 646-7701

**Dean:** Sandy Lamba

**Administrative Assistant:** Janet Leary

**Faculty Contact:** Lauren Taylor-Hill



## **P.A.C.E. - EDUCATION, BEHAVIORAL SCIENCE, AND THE SOCIAL WORLD - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### **ARE YOU THE KIND OF PERSON WHO...**

- ...desires to question and explore physical, biological, or cultural happenings?
- ...enjoys using your skills with words to serve people?
- ...likes to observe, learn, analyze, evaluate, or solve problems?
- ...is interested in how social systems and society works?

## **P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### **ARE YOU THE KIND OF PERSON WHO...**

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

## Guided Pathways:

# Anthropology AA-T

Associate in Arts for Transfer | GE Pattern: IGETC | Program Total Units: 60.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Anthropologist • Archaeologist • Post-Secondary Teacher • Curator

## What your potential plan could look like...

### 1 First Semester

Total Recommended Units: 15

- ENGL 001 College Composition (IGETC 1A) 4 units
- LR 010 Introduction to Library Research 1 unit
- MATH 011 Statistics (IGETC 2B) 4 units
- ANTH 002 Cultural Anthropology (IGETC 4) 3 units
- UC Transferable Elective 3 unit  
*Suggested: COUN 007*

### 2 Second Semester

Total Recommended Units: 14.5

- ANTH 001 Physical Anthropology (IGETC 5B) 3 units
- ANTH 001L Physical Anthropology Lab (IGETC 5C) 1.5 units
- ENGL 002 or ENGL 004 IGETC 1B 4 units
- HIST 017, 018, 028, 029, or 037 IGETC 3B/American Institutions 3 units
- IGETC 3A - *Suggested:* 3 units  
ART 012 CINA 011 MUSC 013 or THEA 013

### 3 Third Semester

Total Recommended Units: 13

- ANTH 007 Archaeology (IGETC 4) 3 units
- SOC 001 Intro to Sociology (IGETC 4/ANTH List C) 3 units
- ANTH LIST B of the ADT 3 units  
COMM 012, GEOG 002, PSYC 007, or SOC 001
- GEOL 002 Physical Geology (MAJOR/ANTH List A) 1 units
- UC Transferable Elective 3 unit  
(If Taking ASL 001)

### 4 Fourth Semester

Total Recommended Units: 12

- PLSC 001 or 005 IGETC 4/American Institutions 4 units
- IGETC 3A 1 unit  
*Suggested: ART 001*
- ANTH LIST C of the ADT 4 units  
*Suggested: GEOL 002*
- LR 010 Introduction to Library Research 1 unit

Courses Below May Be Taken Any Time  
(Fall, Spring or Summer)

Total Recommended Units: 6

- COMM 001, 002, or 006 IGETC 1C 3 units
- GEOL 001 ANTH LIST A/IGETC 5A 3 unit

■ Square, darker color:  
Required Courses/  
Courses in Discipline

○ Rounded, lighter color:  
GE Courses/Categories

# Anthropology

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## Associate in Arts in Anthropology for Transfer (ADT: AA-T)

### Program Description

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

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

### To earn the Associate in Arts in Anthropology for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Arts in Anthropology for Transfer degree, will be able to:

1. Demonstrate an understanding of anthropology as a science, in particular with regard to major theories, methods, and applications.
2. Demonstrate an understanding of human biological diversity, and be able to discuss processes responsible for such variation.
3. Demonstrate an understanding of human cultural diversity, and be able to discuss processes responsible for such variation.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
ANTH 001 Physical Anthropology .....	3
ANTH 001L Physical Anthropology Laboratory .....	1.5
ANTH 002 Cultural Anthropology .....	3
ANTH 007 Archaeology .....	3
MATH 011 Elementary Statistics.....	4
3-5 units from List A .....	3-5
3-5 units from List B .....	3-5
<b>Required Major Total units</b> .....	<b>20.5-23.5</b>

<b>List A (select 3-5 units)</b> .....	<b>Units</b>
BIO 004 Human Anatomy .....	5
GEOL 010 Introduction to Geographic Information Systems .....	3
PSYC 004 Research Methods in Behavioral Science .....	3
GEOL 001 Physical Geology .....	3
and	
GEOL 002 Geology Laboratory .....	1

<b>List B (select 3-5 units)</b> .....	<b>Units</b>
Any List A course(s) not already used.....	3-5
COMM 012 Intercultural Communication .....	3
GEOG 002 Cultural Geography .....	3
PSYC 007 Cross-Cultural Psychology .....	3
SOC 001 Introduction to Sociology.....	3

# Art Department

## DEGREES:

Art History (AA-T)  
Graphic Design & Illustration (AA)  
Studio Art (AA-T)  
Studio Arts with Emphasis (AA)

## COURSES:

ART (Art)  
ARTD (Digital Art)

## CONTACT INFORMATION:

School of Liberal Arts

**Building:** 1300 **Room** 1307B

**Phone Number:** (707) 864-7250

**Fax Number:** (707) 646-2072

**Dean:** Neil Glines

### Administrative Assistants:

Leigh Anne Jones

Donna Meyer

### Faculty Contact:

Ferdinanda Florence

Marc Lancet

Jeanne Lorenz

Marc Pandone

Rachel Smith



## P.A.C.E. - VISUAL, PERFORMANCE, AND LANGUAGE ARTS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE (All Programs)

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to express yourself creatively and using imagination or intuition?
- ...enjoys feeling free to be inventive without limits?
- ...likes to inform, enlighten, help, or teach, using your skills with words and physicality to serve people?
- ...is interested in self-expression and thinking critically on the world in which we live?

## P.A.C.E. - EDUCATION, BEHAVIORAL SCIENCE, AND THE SOCIAL WORLD - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE (Art History AA-T)

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to question and explore physical, biological, or cultural happenings?
- ...enjoys using your skills with words to serve people?
- ...likes to observe, learn, analyze, evaluate, or solve problems?
- ...is interested in how social systems and society works?

## Guided Pathways:

# ART HISTORY AA-T

Associate in Arts for Transfer | GE Pattern: IGETC | Program Total Units: 61 - 64.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Art, Drama, History and/or Music Teacher • Art Therapist • Art Director • Museum Curator, Technician, or Conservator • Fine Artist

## What your potential plan could look like...

### 1 First Semester

Total Recommended Units: 14 - 15

- ENGL 001 4 units  
College Composition (IGETC 1A)
- LR 010 1 unit  
Introduction to Library Research
- MATH 011 or 012 3 - 4 units  
(IGETC 2B)
- ART 001 3 units  
Art History (IGETC 3A)
- LIST B of the ADT 3 unit  
Suggested: ART 006, 007, or 008

### 3 Third Semester

Total Recommended Units: 13-15.5

- ART 003A or ART 003B 3 units  
Art of Asia or Art of Africa, Oceania, and Americas
- COMM 012, HIST 037, PLSC 005, 3 units  
PSYC 007, or SJS 002
- (IGETC 5A/5C) Suggested: 3 units  
ASTR 010 & 020, GEOL 001 & 002, or GEOG 001/ 001L
- ASL 001, FREN 001, or 3 - 5 units  
SPAN 001, or UC Transferable Elective \*

\*Depends on whether or not student took two years of the same foreign language in high school and passed with a minimum grade of c.

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester

Total Recommended Units: 13

- ENGL 002 or 004 4 units  
(IGETC 1B)
- COMM 001, 002, or 006 3 units  
(IGETC 1C)
- ART 002 3 units  
Art History (IGETC 3A)
- ART 014 3 units  
Intro to Drawing

### 4 Fourth Semester

Total Recommended Units: 15

- PLSC 001 or 005 3 units  
(IGETC 4/American Institutions)
- (IGETC 5B) Suggested: 3 units  
BIO 012, 016, 018, 020, OR 025
- ART 011 or ART 012 3 units  
Survey of Modern Art or Inside/Outside
- IGETC 4 3 units  
Suggested: ANTH 002 or 007
- UC Transferable Elective 3 units

Courses Below May Be Taken Any Time  
(Fall, Spring or Summer)

Total Recommended Units: 6

- HIST 017, 018, 028, 029, or 037 3 units  
(IGETC 3B/American Institutions)
- UC Transferable Elective 3 unit

# Art

## Associate in Arts in Art History for Transfer (ADT: A.A.-T)

### Program Description

The Art History program provides the academic and practical experience to prepare students for a career, or further education at a four-year institution, in art history and related fields, such as museum studies, art education and administration. The Associate in Arts in Art History for Transfer provides the academic and practical experience to transfer into the CSU system to complete a baccalaureate degree that will prepare students for a career in Art History.

Students wishing to transfer to a University of California system for an Art History B.A. should take all the art history courses in the program (ART 001, 002, 003A, 003B, 011 and 012). Students completing the Associate in Arts in Art History for Transfer are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the Associate in Arts in Art History for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor's degree. The Associate in Arts in Art History for Transfer degree also prepares students for art history 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 Art History for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Arts in Art History for Transfer degree will be able to:

1. Students will analyze the relationship between various cultures and their art forms, linking specific works, artists, and art movements/periods to relevant historical events, cultural values, and belief systems.
2. Students will analyze issues related to the perception, scholarship, and display of artwork.
3. Students will use scholarly sources effectively and ethically to support their analyses of art.

### REQUIRED COURSES ..... Units

ART 001 Art History .....	3
ART 002 Art History .....	3
ART 014 Introduction to Drawing .....	3
3 units from List A.....	3
3 units from List B.....	3
3 units from List C.....	3

### Required Major Total units..... 18

### List A: Non-Western Arts History (select 3 units) .. Units

ART 003A Arts of Asia .....	3
ART 003B Arts of Africa, Oceania, and the Americas .....	3

### List B: Studio Art (select 3 units) ..... Units

ART 004 Life Drawing.....	3
ART 006 Design Principles in 2-Dimensions .....	3
ART 007 Design-Color .....	3
ART 008 Design Principles in 3-Dimensions .....	3
ART 016 Beginning Painting.....	3
ART 019 Figure Painting.....	3

ART 023 Introduction to Ceramics: Hand Building .....	3
ART 026 Introduction to Ceramics: Wheel Throwing Techniques.....	3
ART 031 Sculpture .....	3
ART 032 Sculpture: Human Figure.....	3
ART 038 Introduction to Printmaking.....	3
ART 039 Etching and Engraving: Line Techniques.....	3
ART 043 Printmaking: Relief Printing, Including Woodcut.....	3
ART 045A Graphic Design I .....	3
PHOT 030 Beginning Photography .....	3

### List C: Modern, Contemporary, and Theory (select 3 units)..... Units

ART 011 Survey of Modern Art.....	3
ART 012 Inside/Outside: The Cultures and Identities of Visual Artists in a Diverse America .....	3

## Guided Pathways:

# STUDIO ARTS AA-T

Associate in Arts for Transfer | GE Pattern: IGETC | Program Total Units: 61-63.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Art Therapist • Museum Curator, Technician, or Conservator • Art Director •

Multimedia Artist and Animator • Art Educator • Graphic Designer • Fine Artist

## What your potential plan could look like...

### 1 First Semester

Total Recommended Units: 14

- ENGL 001 College Composition (IGETC 1A) 4 units
- LR 010 Introduction to Library Research 1 unit
- ART 002 Art History (IGETC 3A) 3 units
- ART 006 Design in 2 Dimensions 3 units
- ART 008 Design in 3 Dimensions 3 units

### 3 Third Semester

Total Recommended Units: 15-17

- LIST A of the ADT 3 units  
Suggested: ART 001/MAJOR/IGETC AREA 3A
- LIST B of the ADT 3 units
- IGETC 5B Suggested: 3 units  
BIO 012, 016, 018, 020, OR 025
- COMM 001, 002, or 006 3 units  
(IGETC 1C)
- ASL 001, FREN 001, or 3 - 5 units  
SPAN 001, or UC Transferable Elective \*

\*Depends on whether or not student took two years of the same foreign language in high school and passed with a minimum grade of c.

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester

Total Recommended Units: 13

- ENGL 002 or 004 (IGETC 1B) 4 units
- MATH 012 (IGETC 2) 3 units
- LIST B of the ADT 3 units
- ART 014 Introduction to Drawing 3 units

### 4 Fourth Semester

Total Recommended Units: 13-15

- LIST B of the ADT 3 units
- PLSC 001 or 005 3 units  
(IGETC 4/American Institutions)
- IGETC 5A/5C Suggested: 4 - 4.5 units  
ASTR 010 & 020, GEOL 001 & 002, or GEOG 001 & 001L
- COMM 012, COUN 015, HIST 037, 3 units  
PSYC 007, or SJS 002 (IGETC 4/Cross-cultural)

Courses Below May Be Taken Any Time  
(Fall, Spring or Summer)

Total Recommended Units: 6

- UC Transferable Elective 3 units
- HIST 017, 018, 028, 029, or 037 3 units  
(IGETC 4/American Institutions)

# Art

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

### Program Description

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

The Associate in Arts in Studio Arts for Transfer is especially designed for students who plan to complete a bachelor's degree in Studio Arts at a CSU campus. Students completing the Associate in Arts in Studio Arts for Transfer are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the A.A.-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 studio art programs at other four-year institutions, but does not come with the same guarantees. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

### To earn the Associate in Arts in Studio Arts for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Arts in Studio Arts for Transfer will be able to:

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.

<b>REQUIRED CORE</b> .....	<b>Units</b>	ART 021 Watercolor .....	3
ART 002 Art History .....	3	ART 023 Introduction to Ceramics: Hand Building .....	3
ART 006 Design Principles in 2-Dimensions .....	3	or	
ART 008 Design Principles in 3-Dimensions .....	3	ART 026 Introduction to Ceramics:	
ART 014 Introduction to Drawing.....	3	Wheel Throwing Techniques.....	3
One course from List A .....	3	ART 024 Intermediate Ceramics: Hand Building.....	3
Three courses from List B .....	9	ART 031 Sculpture .....	3
<b>Required Major Total units</b> .....	<b>24</b>	or	
<b>List A: (select one course) .....</b>	<b>Units</b>	ART 034 Ceramic Sculpture .....	3
ART 001 Art History .....	3	ART 032 Sculpture: Human Figure.....	3
ART 003A Arts of Asia .....	3	ART 033 Intermediate Sculpture .....	3
ART 003B Arts of Africa, Oceania, and the Americas ....	3	ART 038 Introduction to Printmaking.....	3
ART 011 Survey of Modern Art.....	3	ART 039 Etching and Engraving: Line Techniques.....	3
<b>List B: (select three courses) .....</b>	<b>Units</b>	ART 040 Etching and Engraving: Tone .....	3
ART 004 Life Drawing.....	3	ART 041 Etching and Engraving: Color.....	3
or		ART 042 Screen Printing .....	3
ART 015 Intermediate Drawing .....	3	ART 043 Printmaking: Relief Printing,	
ART 005 Life Drawing - Intermediate .....	3	Including Woodcut.....	3
ART 007 Design-Color.....	3	ART 045A Graphic Design I .....	3
ART 016 Beginning Painting.....	3	ART 045C Typography.....	3
ART 017 Intermediate Painting: Acrylic and Oil.....	3	ART 046 Illustration .....	3
ART 019 Figure Painting.....	3	PHOT 030 Beginning Photography .....	3

# Art

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## Graphic Design & Illustration

*Associate in Arts*

### Program Description

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

The Associate in Arts can be obtained by completing the 27-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Graphic Design & Illustration Associate in Arts will be able to:

1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

### REQUIRED COURSES ..... Units

ART 004 Life Drawing..... 3  
or

ART 015 Intermediate Drawing ..... 3

ART 006 Design Principles in 2-Dimensions ..... 3

ART 007 Design-Color..... 3

ART 014 Introduction to Drawing..... 3

ART 045A Graphic Design I..... 3

ART 045B Graphic Design II ..... 3

ART 045C Typography..... 3

ART 046 Illustration I ..... 3

ART 046C Illustration II ..... 3

**Required Major Total Units.....27**

# Art

## Studio Arts with Emphasis

*Associate in Arts*

### Program Description

The Studio Arts with Emphasis Program offers students a strong fine arts foundation, with core courses that develop essential technical skills, aesthetic vision, historical and contemporary art context, and an understanding of the artist's role as a global citizen. Students may select an Emphasis which will allow deeper technical, aesthetic, and conceptual study within a specific medium: drawing and mixed media; painting; printmaking; sculpture; and ceramics. The Studio Arts with Emphasis is designed for students seeking to further their study at an art school or at one of the University of California art departments. Students who earn this degree will also meet the requirements for the Studio Arts AA-T.

The Associate in Arts can be obtained upon completion the 26-27 unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Studio Arts with Emphasis Associate in Arts will be able to:

1. Demonstrate advanced skills in selecting a broad range of appropriate materials and techniques to solve creative problems.
2. Apply advanced 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 of art at an advanced level, with breadth and depth of analysis.

<b>REQUIRED CORE</b> .....	<b>Units</b>
ART 002 Art History .....	3
ART 006 Design Principles in 2-Dimensions .....	3
ART 007 Design-Color .....	3
ART 008 Design Principles in 3-Dimensions .....	3
ART 014 Introduction to Drawing.....	3
One course from List A: Art History .....	3
Three courses from one of the Areas of Emphasis.....	8-9
<b>Required Major Total Units</b> .....	<b>26-27</b>

<b>List A: Art History (select one course)</b> .....	<b>Units</b>
ART 001 Art History .....	3
ART 011 Survey of Modern Art.....	3

### Areas of Emphasis: (select three courses from one Area)

<b>Drawing and Mixed Media</b> .....	<b>Units</b>
ART 004 Life Drawing.....	3
ART 005 Life Drawing.....	3
ART 015 Intermediate Drawing .....	3
ART 015B Collage & Assemblage.....	3
ART 020 Landscape Drawing and Painting — Reflections of Nature.....	2-3

<b>Painting</b> .....	<b>Units</b>
ART 016 Beginning Painting.....	3
ART 017 Acrylic and Oil Painting.....	3
ART 018 Advanced Intermediate Painting: Acrylic and Oil Painting.....	3
ART 019 Figure Painting.....	3
ART 021 Watercolor .....	3

<b>Printmaking</b> .....	<b>Units</b>
ART 038 Introduction to Printmaking.....	3
ART 039 Etching and Engraving: Line Techniques.....	3
ART 040 Etching and Engraving: Tone .....	3
ART 041 Etching and Engraving: Color.....	3
ART 042 Screen Printing .....	3
ART 043 Printmaking: Relief Printing, Including Woodcut .....	3

<b>Sculpture</b> .....	<b>Units</b>
ART 031 Sculpture .....	3
ART 032 Sculpture: Human Figure.....	3
ART 033 Intermediate Sculpture .....	3
ART 034 Ceramic Sculpture .....	3

<b>Ceramics</b> .....	<b>Units</b>
ART 023 Introduction to Ceramics: Hand Building .....	3
ART 024 Intermediate Ceramics: Hand Building.....	3
ART 025 Ceramic Design And Decoration: Hand Building Methods.....	3
ART 026 Introduction to Ceramics: Wheel Throwing Techniques .....	3
ART 027 Intermediate Ceramics: Wheel Throwing Techniques .....	3
ART 028 Ceramic Design: Wheel Throwing Techniques..	3
ART 029 Raku Pottery .....	3
ART 030C Ceramics: History, Culture, Practice .....	3
ART 035A Introduction to Wood-Fired Ceramics.....	3
ART 037 Clay and Glazes for the Ceramic Artist .....	3

# Astronomy Department

## DEGREES:

Astronomy (AS)

## COURSES:

ASTR (Astronomy)

## CONTACT INFORMATION:

School of Mathematics and Sciences

**Building:** 2700 Room 2719B

**Phone Number:** (707) 864-7110

**Fax Number:** (707) 646-2054

**Dean:** Joseph Ryan

### Administrative Assistants:

Mathematics: Kayla Kaywood

Sciences: Kelsi Mundell

### Faculty Contact:

Zach Hannan

Melanie Lutz



**P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

# Astronomy

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## Astronomy

*Associate in Science*

### Program Description

The Astronomy program introduces students to the physical properties and processes that govern celestial bodies in the Universe. Students may take astronomy courses to satisfy their natural sciences requirements or to transfer with a major in astronomy/astrophysics or double major in astronomy and physics to the university. Transfer level astronomy curricula stress very strong preparation in physics and mathematics. While most astronomy courses will be taken at the upper division or graduate level, exposure to lower division astronomy courses will assist in exploring the major. Students planning to transfer may need to complete additional coursework and/or select specific electives required by the transfer institution and should consult with a counselor to identify required courses at their target university. Students who pursue a B.S. degree in astronomy will be qualified to enter a teaching credential program, operate a planetarium, and assist at an observatory. With an M.S. degree, students can teach astronomy or physics at a community college, be a telescope operator at a major observatory, or work in industry. A Ph.D. qualifies students for a career in research at a university, space agency, or observatory.

The Associate in Science in Astronomy can be obtained by completing the 39-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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

Students who complete the Astronomy Associate in Science will be able to:

1. Explain and discuss basic astronomical phenomena including, but not limited to: gravitation, the seasons, the phases of the Moon, eclipses.
2. Apply the laws of physics to explain the properties of planets, stars, galaxies, and the Universe.
3. Explain and discuss the impact and history of scientific theories and their importance in the advancement of astronomy.
4. Demonstrate proficiency in applying scientific procedures for making observations and measurements typical of modern astronomical research.

### REQUIRED COURSES ..... Units

ASTR 010 General Astronomy .....	3
ASTR 020 Astronomy Laboratory.....	1
MATH 020 Analytic Geometry and Calculus I .....	5
MATH 021 Analytic Geometry and Calculus II .....	5
MATH 022 Analytic Geometry and Calculus III .....	4
PHYS 006 Physics for Science and Engineering.....	5
PHYS 007 Physics for Science and Engineering.....	5
PHYS 008 Physics for Science and Engineering.....	5
6 units from List A: .....	6
<b>Required Major Total Units.....</b>	<b>39</b>

### List A: (select 6 units) ..... Units

ASTR 030 The Solar System .....	3
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 001 General Chemistry .....	5
CIS 022 Introduction to Programming.....	3

# Automotive Department

## DEGREES:

Automotive Technician (AS)

## CERTIFICATES OF ACHIEVEMENT

Automotive Automatic Transmissions  
and Transaxles

Automotive Electrical and Body Systems

Automotive Maintenance and Light Repair

## COURSES:

ATEC (Automotive Technology)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

### Faculty Contact:

Paul Hidy

Ricky "Rick" Marshall

Andrew McGee



## P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

# Automotive

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## Automotive Technician

*Associate in Science*

### Program Description

The Automotive Technician program is designed to prepare graduates for entry level employment in the automotive industry as apprentice technicians, parts specialists, service consultants, or specialists in one of the many areas in the automotive service and repair industry.

The Associate in Science can be obtained upon completion of the 45-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Automotive Technician Associate in Science will be technically proficient in entry level skills as defined by the National Automotive Technician's Education Foundation (NATEF) by demonstrating:

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

<b>REQUIRED COURSES</b> .....	<b>Units</b>
ATEC 070 Automotive Fundamentals .....	3
ATEC 130 Automotive Suspension and Steering.....	4
ATEC 131 Automotive Electrical Systems .....	4
ATEC 132 Automotive Brake Systems .....	4
ATEC 133 Automotive Engine Repair .....	4
ATEC 134 Automatic Transmissions/Transaxles .....	4
ATEC 135 Automotive Engine Performance.....	4
ATEC 136 Automotive Manual Drivetrain and Axles.....	4
ATEC 137 Automotive Heating and Air Conditioning.....	4
ATEC 138 Automotive Electronics.....	4
ATEC 139 Advanced Engine Performance.....	4
ATEC 140 Hybrid Vehicle Maintenance and Repair .....	2
<b>Required Major Total Units.....</b>	<b>45</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Automotive Technician."

# Automotive

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## Automotive Automatic Transmissions and Transaxles

*Certificate of Achievement*

### Program Description

This program is designed to prepare graduates for entry level employment in the automotive industry as an Automatic Transmission/Transaxle Service/Repair Technician.

The Certificate of Achievement can be obtained by completing the 17-unit major. All courses 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 Automatic Transmissions and Transaxles Certificate of Achievement will be able to:

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

<b>REQUIRED COURSES.....</b>	<b>Units</b>
ATEC 070 Automotive Fundamentals .....	3
ATEC 131 Automotive Electrical Systems .....	4
ATEC 134 Automatic Transmissions/Transaxles.....	4
ATEC 138 Automotive Electronics.....	4
ATEC 140 Hybrid Vehicle Maintenance and Repair .....	2
<b>Total Units.....</b>	<b>17</b>

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Automotive Automatic Transmissions and Transaxles."

# Automotive

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## Automotive Electrical and Body Systems

*Certificate of Achievement*

### Program Description

This program is designed to prepare graduates for entry level employment in the automotive industry as an Automotive Electrical/Electronics Service/Repair Technician.

The Certificate of Achievement can be obtained by completing the 17-unit major. All courses 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 Automotive Electrical and Body Systems Certificate of Achievement will be able to:

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

<b>REQUIRED COURSES.....</b>	<b>Units</b>
ATEC 070 Automotive Fundamentals .....	3
ATEC 131 Automotive Electrical Systems .....	4
ATEC 137 Automotive Heating and Air Conditioning.....	4
ATEC 138 Automotive Electronics.....	4
ATEC 140 Hybrid Vehicle Maintenance and Repair .....	2
<b>Total Units.....</b>	<b>17</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Automotive Electrical and Body Systems."

# Automotive

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## Automotive Maintenance and Light Repair

*Certificate of Achievement*

### Program Description

This program is designed to prepare graduates for entry level employment in the automotive industry as apprentice technicians, lube technician, express service technician or parts specialist.

The Certificate of Achievement can be obtained by completing the 17-unit automotive major. 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 Automotive Maintenance and Light Repair Certificate Achievement will be able to:

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

<b>REQUIRED COURSES.....</b>	<b>Units</b>
ATEC 070 Automotive Fundamentals .....	3
ATEC 130 Automotive Suspension and Steering.....	4
ATEC 131 Automotive Electrical Systems .....	4
ATEC 132 Automotive Brake Systems .....	4
ATEC 140 Hybrid Vehicle Maintenance and Repair .....	2
<b>Total Units.....</b>	<b>17</b>

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Automotive Maintenance and Light Repair Technician."

# Biology Department

## DEGREES:

Biology (AS-T)

Biology (AS)

Biomedical Sciences (AS)

## CERTIFICATES OF ACHIEVEMENT

Biomedical Sciences

## COURSES:

BIO (Biology)

## CONTACT INFORMATION:

School of Mathematics and Sciences

**Building:** 2700 Room 2719B

**Phone Number:** (707) 864-7110

**Fax Number:** (707) 646-2054

**Dean:** Joseph Ryan

**Administrative Assistants:**

Mathematics: Kayla Kaywood

Sciences: Kelsi Mundell

**Faculty Contact:**

James "Jim" Dekloe

Kristina Ferrebee

James "Jim" Long

Margherita Molnar

Renee Moore

Brad Paschal

Edward "Ed" Re

Michelle Smith

James Word

Cristina Young

## P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

# Guided Pathways:

## BIOLOGY AS-T

Associate in Science for Transfer | GE Pattern: IGETC | Program Total Units: 61 - 64.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

### Career Paths

Biological Technician • Biologist • Molecular and Cellular Biologist • Geneticist • Life Scientist • Natural Science Manager • Environmental Restoration • Secondary Education • Post-Secondary Education

### What your potential plan could look like...

#### 1 First Semester Total Recommended Units: 15

- ENGL 001** 4 units  
College Composition (IGETC 1A)
- LR 010** 1 unit  
Introduction to Library Research
- MATH 020** 5 units  
Analytic Geometry & Calculus (IGETC 2)
- CHEM 001** 5 unit  
General Chemistry I (IGETC 5A/5C)

#### 3 Third Semester Total Recommended Units: 16

- PHYS 002 or PHYS 006** 5 units  
General PHYS I or PHYS for Science/Engineering I\*
- BIO 003** 5 units  
Evolution, Ecology, and Biodiversity
- COMM 001, 002, or 006** 3 units  
(IGETC 1C)
- HIST 017, 018, 028, 029, or 037** 3 units  
(IGETC 3B/American Institutions)

\*Requires Math 021

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

#### 2 Second Semester Total Recommended Units: 14

- CHEM 002** 5 units  
General Chemistry II
- BIO 002** 5 units  
Cell & Molecular Biology (IGETC 5B)
- ENGL 002 or 004** 4 units  
(IGETC 1B)

#### 4 Fourth Semester Total Recommended Units: 14

- PHYS 004 or PHYS 007** 5 units  
General PHYS II or PHYS for Science/Engineering II\*
- BIO 003** 3 units  
Evolution, Ecology, and Biodiversity
- IGETC 3A or 3B** 3 units
- IGETC 4** 3 units  
Suggested: SOC 001 or ANTH 002

\*Requires Math 021 & PHYS 006

#### Courses Below May Be Taken Any Time (Fall, Spring or Summer) Total Recommended Units: 6

- IGETC 3A Suggested** 3 units  
ART 012, CINA 011, MUSC 013, or THEA 013
- PLSC 001 or 005** 3 unit  
(IGETC 4/American Institutions)

Note: The University of California transfer pathway for Biology also requires MATH 021, CHEM 003, and CHEM 004, but does NOT require courses in Physics. See a counselor for a personalized education plan.

# Biology

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

### Program Description

The Associate in Science in Biology for Transfer program prepares students to transfer to the California State University system as a biology major.

The Associate in Science in Biology for Transfer prepares students to seamlessly transfer to the California State University system as a Biology major. This degree gives Biology majors the Biology, Mathematics, Chemistry, and Physics knowledge that allows them to succeed in upper division courses after transfer. In the major, students gain knowledge of biological molecules, cell structure and function, bioenergetics, Mendelian and molecular genetics, microbiology, plant biology, evolution, ecology, biodiversity, and biotechnology. In the laboratory students learn experimental design including data collection and analysis, keeping a legal laboratory notebook, and reporting the results in a standard scientific journal format. The Biology courses give students an extensive laboratory experience where they gain essential skills required to study and manipulate macromolecules, aseptically transfer cells, work with the common model organisms used in Biology research, and carry out a field study.

### Associate in Science in Biology for Transfer

Students who complete this 35 unit major will be guaranteed admission with junior status to the California State University system, though not to a particular campus or Major.

### The Associate in Science in Biology for Transfer requires:

1. Completion of 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. Completion of the 35 units of courses in the major.
2. Obtainment of a minimum grade point average of 2.0. Students must earn a C or better in all courses required for the major. A “P” (Pass) grade is not an acceptable grade for courses in the major.

### Program Outcomes

Students who complete the Associate in Science in Biology for Transfer will be able to:

1. Design and/or interpret an investigation, including data collection and/or analysis.
2. Describe the molecular basis of genetics and energetics.
3. Explain the principles and mechanisms of microevolution and macroevolution.

<b>REQUIRED COURSES.....Units</b>	<b>List A.....Units</b>
BIO 002 Cell and Molecular Biology ..... 5	PHYS 002 General Physics (Non-Calculus) ..... 5
BIO 003 Evolution, Ecology & Biodiversity ..... 5	PHYS 004 General Physics (Non-Calculus) ..... 5
CHEM 001 General Chemistry I ..... 5	
CHEM 002 General Chemistry II ..... 5	<b>List B.....Units</b>
MATH 020 Analytic Geometry and Calculus I ..... 5	PHYS 006 Physics for Science and Engineering..... 5
Select List A or List B..... 10	PHYS 007 Physics for Science and Engineering..... 5
<b>Required Major Total Units.....35</b>	

# Biology

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## Biology

*Associate in Science*

### Program Description

This program has been designed for students planning on transferring to a campus of the University of California as a Biology, Cell Biology, Molecular Biology, or Biochemistry major. The program incorporates a study of the mathematics, chemistry, and biology required to understand and research biological processes including cell biology, molecular biology, bioenergetics, genetics, population genetics, microbiology, evolution, developmental biology, ecology, biodiversity, and biotechnology.

The Associate in Science can be obtained by completing the 40-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Biology Associate in Science will be able to:

1. Design and/or interpret an investigation, including data collection and/or analysis.
2. Describe the molecular basis of genetics and energetics.
3. Explain the principles and mechanisms of microevolution and macroevolution.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
BIO 002 Cell and Molecular Biology .....	5
BIO 003 Evolution, Ecology & Biodiversity .....	5
CHEM 001 General Chemistry I .....	5
CHEM 002 General Chemistry II .....	5
CHEM 003 Organic Chemistry I .....	5
CHEM 004 Organic Chemistry II .....	5
MATH 020 Analytic Geometry and Calculus I .....	5
MATH 021 Analytic Geometry and Calculus II .....	5
<b>Required Major Total Units.....</b>	<b>40</b>

# Biology

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## Biomedical Sciences

*Certificate of Achievement and Associate in Science*

### Program Description

The Biomedical Sciences program 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.

The Certificate of Achievement can be obtained upon completion of the 18-19-unit major. The Associate in Science can be obtained by completing the 18-19-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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

Students who complete the Biomedical Sciences Certificate of Achievement/Associate in Science will be able to:

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

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

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

# Biotechnology Department

## DEGREES:

Biomanufacturing (BS)

Industrial Biotechnology (AS)

## CERTIFICATES OF ACHIEVEMENT

Industrial Biotechnology

Biotechnology Laboratory Assistant

Stem Cells and Cell-Based Technologies

## COURSES:

BIOT (Biotechnology)

## CONTACT INFORMATION:

School of Mathematics and Sciences

**Building:** 2700 Room 2719B

**Phone Number:** (707) 864-7110

**Fax Number:** (707) 646-2054

**Dean:** Joseph Ryan

### Administrative Assistants:

Mathematics: Kayla Kaywood

Sciences: Kelsi Mundell

### Faculty Contact:

James "Jim" Dekloe

Edward "Ed" Re

Gulnur Sanden

Michael Silva

## P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

## P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

# Biotechnology

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## **Biomanufacturing**

*Bachelor of Science (Baccalaureate)*

Solano Community College is one of fifteen community colleges in the state of California to offer a pilot four year, or baccalaureate, degree. Solano Community College's degree is a Bachelor of Science in Biomanufacturing. In biomanufacturing scientists develop techniques to grow genetically engineered cells (bacterial, yeast, or animal cells) in large tanks called bioreactors and develop methods to purify the protein that the cells produce. Then technicians use analytical techniques to prove the purity of the isolated protein. In the future Biomanufacturing will be expanded to include the industrial production of biofuels, biomaterials, stem cells, and other products currently manufactured using chemical rather than biological techniques.

### **Program Description**

The Biomanufacturing program builds upon the Associate in Science in Industrial Biotechnology. In the baccalaureate program students gain knowledge in biology, chemistry, engineering, statistics, quality, regulatory affairs, and business. Students use biomanufacturing laboratory facilities to gain process development skills. Many of the courses have been designed with curriculum that aligns with the requirements of certifications from professional organizations.

The Bachelor of Science is awarded upon successful completion of a total of 120 units that include 60 lower-division units and ten upper-division major courses, three upper division general education courses, and electives. All courses in the major must be completed with a minimum grade of C.

### **Program Outcomes**

#### **Technology:**

1. Identify and critically analyze two viable options for a biomanufacturing process. The critical analysis will include the technical, financial, and environmental impact of the two options as well as the identification of the benefits and disadvantages of each.
2. Produce a professional report and presentation representing their opinion regarding the advantages of selecting a specific biomanufacturing process.

#### **Quality:**

3. Demonstrate the skills needed to conduct an investigation and analysis of an Out of Specification deviation that occurred during a production step in the manufacturing of a pharmaceutical protein. The student will be able to determine the impact of the OOS deviation on the batch of protein.
4. Produce a written Corrective Action Preventative Action report in a format standard to the industry. The report will include evidence to justify their conclusions and action plan.
5. Demonstrate the ability to apply Quality by Design (QbD) principles (understanding of the product, the process, and the process control) as adopted by the U.S. Food and Drug Administration (FDA) to design a robust, stable, and controlled manufacturing process for a protein pharmaceutical that can be carried out under current Good Manufacturing Practices (cGMPs). This includes the ability to predetermine values and potential ranges of the critical quality attributes (CQAs) of the product and the critical material attributes (CMAs) of the materials. Students will also be able to determine which parameters would benefit from a Design of Experiments (DoE) approach for their optimization, and construct a strategy for experimental planning and data analysis.
6. Use a quality risk assessment approach to perform a criticality assessment to determine the Critical Process Parameters (CPPs) that would need to be monitored and controlled.

# Biotechnology

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## Program Requirements and Courses

The program has been designed to follow a cohort model: all students take all of the courses in order.

### REQUIRED COURSES

First Semester	Units	Third Semester	Units
BIOT 401 Biomanufacturing Process Sciences.....	5	BIOT 405 Emerging Biomanufacturing Technologies.....	3
BIOT 407 Advanced Topics in Quality Assurance and Regulatory Affairs.....	4	BIOT 406 Supply Chain and Enterprise Resource Planning .....	3
ENGL 400 Advanced Technical Writing: Writing in the Scientific Professions.....	3	BIOT 408 Six Sigma and Lean Manufacturing .....	4
		PHIL 400 Bioethics .....	3
Second Semester	Units	Fourth Semester	Units
BIOT 402 Design of Experiments for Biomanufacturing .....	4	BIOT 409 Methods in Quality Improvements, Investigations and Audits .....	4
BIOT 403 Design of Biomanufacturing Facilities, Critical Utilities, Processes, and Equipment.....	4	BIOT 410 Emerging Trends in Biomanufacturing Quality .....	3
BIOT 404 Bioprocess Monitoring and Control .....	5	BUS 400 Project Management .....	3
		<b>Total Units .....</b>	<b>48 Units</b>

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## Biomanufacturing Program Eligibility Requirements

The Biomanufacturing Bachelor of Science program admits students once per year in the fall. Eligibility requirements, application process, and related information is available online at <http://www.solano.edu/biomanufacturing>.

All of the following requirements must be met in order to apply to the Biomanufacturing program. For any questions about these items, meet with an Academic Counselor. For counseling information, please visit

<http://www.solano.edu/counseling/>.

1. Overall cumulative grade point average (GPA) of 2.5 for ALL college coursework.
2. Completion of, or current Spring semester enrollment in Biomanufacturing Program  
Prerequisites:  
*Courses must be completed with a minimum grade of C and with a combined GPA of 2.5*  
BIO 002 Cell and Molecular Biology .....- 3. Completion of lower division IGETC or CSU General Education Breadth.  
5  
3  
3  
4  
4  
5  
4
- 4. Applicants who have attended college outside the United States must have transcripts evaluated by a National Association of Credential Evaluation Services (NACES) approved independent agency, demonstrating equivalency to the Program Eligibility requirements (1, 2, & 3).
- 5. One Statement of Interest, submitted with your application, explaining why you are interested in the program. Topic below:  
  
Write a Statement of Interest that explains why you would like to complete the Bachelor of Science degree in Biomanufacturing. In this essay, state how your background in the prerequisite courses and/or any job experience has prepared you to succeed in this rigorous program. Emphasize your laboratory background. Include any life experience, special circumstances or barriers that you had to overcome while completing the prerequisite courses.
- 6. Submit unofficial Transcripts

# Biotechnology

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## Steps for Completing the Application Process

### 1. New or Returning Solano Community College Students apply to SCC

*(Students currently enrolled in classes go to Step 2)*

- a. Students who have never attended Solano Community College or are former students (returning SCC students who are not currently enrolled in classes) must submit a current SCC application for admission. Access the SCC home page, [www.solano.edu](http://www.solano.edu), and click on the yellow "APPLY NOW!" button.
- b. After submitting the SCC application for admission, via CCCApply, allow 30 minutes for processing. An email will be sent to the email address provided in the application and will include the applicant's SCC ID number, username and password for their MySolano account. When completing a new application to Solano, if the applicant previously had an ID number, the system will re-activate that same ID number. The applicant will need their SCC ID number to complete the Biomanufacturing application.

### 2. Complete the Biomanufacturing Program Application

- a. The applicant must have their SCC ID number, unofficial transcripts (official transcripts will be required upon acceptance into the program), and Statement of Interest ready.
- b. All required information for admission to the Biomanufacturing Program must be submitted through the link provided on our webpage.

### 3. Once Biomanufacturing Program Application is Submitted

- a. All correspondence regarding the application status will be sent to the email address provided on the application. Applicants will not receive any paper or phone verification regarding their status. The applicant must update their information in MySolano if there is a change in email address.
- b. New student applications for fall semester enrollment will be evaluated beginning March 31st of each year. Incomplete applications will NOT be accepted.

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## Accepted Applicant Requirements

1. Once accepted to the Biomanufacturing program one original official transcript in a sealed envelope from each institution attended, including Solano Community College, must be submitted to the Office of Admissions and Records, prior to being granted permission to enroll and register for classes in the program.

Please send transcripts from institutions from within the US to :

**Solano Community College**

**Admissions and Records**

**Attn: Biomanufacturing Baccalaureate Admissions**

**4000 Suisun Valley Road**

**Fairfield, CA 94534-3197**

### **Foreign Transcripts:**

All foreign transcripts must be evaluated by a NACES agency for determining U.S. equivalency. **\*IF foreign courses were completed or degree earned**, the evaluation must state its equivalency to Program Eligibility requirements (1, 2, & 3). A list of approved agencies can be found in the Admissions and Records Office.

2. If the applicant received notification that they have been accepted into the program, a Biomanufacturing Admitted Student Information Session must be completed before their cohort program begins. A schedule will be made available through the School of Math and Science, Fairfield Campus.
3. Upon completion of the Admitted Student Information Session, the student must schedule an Advisement Session prior to registering for classes. Students will meet with an Academic Counselor to develop a Student Education Plan (SEP) during the Advisement Session.

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## Cost for Biomanufacturing Bachelor of Science Degree

Lower division courses (numbered 001-399/500+) cost \$46 per unit. Non-resident (out-of-state and International students) tuition fees cost \$304 per unit with an \$11.00 per unit nonresidential capital outlay fee.

Upper division courses (numbered 400-499) cost \$130 per unit. The additional fee for upper division units of \$84 cannot be covered by the California College Promise Grant (formerly BOG Fee Waiver).

# Biotechnology

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## Industrial Biotechnology

*Associate in Science*

### Program Description

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

The Associate in Science can be obtained upon completion of the 22-24 unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Industrial Biotechnology Associate in Science will be able to:

1. Explain how the structure and function of protein pharmaceuticals and evaluate which protein properties a production facility can exploit to purify a particular protein from other cellular components.
2. Construct a pathway analyzing how a drug or biologic is produced by genetically engineered cells and subsequently purified.
3. Explain how the manufacturer of pharmaceuticals is regulated by the Food and Drug Administration and other international regulatory agencies and how quality systems assure the safety, purity, identity, consistency, potency, and stability of a product.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
BIOT 001 Principles of Biotechnology.....	3
BIOT 052 Business, Regulatory and Quality Practices in Biotechnology .....	3
BIOT 062 Cell Culture and Protein Recovery .....	4
BIOT 063 Biotechnology Instrumentation: Quality Control & Genetic Engineering.....	4
Select Option A or Option B .....	8-10
<b>Required Major Total Units</b> .....	<b>22-24</b>

<b>Option A</b> .....	<b>Units</b>
BIO 002 Principles of Cell and Molecular Biology.....	5
CHEM 001 General Chemistry I .....	5
<b>Option B</b> .....	<b>Units</b>
BIO 014 Principles of Microbiology .....	4
CHEM 010 Intermediate Chemistry.....	4

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

# Biotechnology

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## Industrial Biotechnology

### *Certificate of Achievement*

#### Program Description

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

The Certificate of Achievement can be obtained upon completion of the 18-24-unit major. Each course 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 Industrial Biotechnology Certificate of Achievement will be able to:

1. Explain how the structure and function of protein pharmaceuticals and evaluate which protein properties a production facility can exploit to purify a particular protein from other cellular components.
2. In preparation to working at a biotechnology company, a successful student should be able to construct a pathway analyzing how a drug of biologic is produced by genetically engineered cells and subsequently purified.
3. Explain how the manufacturer of pharmaceuticals is regulated by the Food and Drug Administration and other international agencies and how quality systems assure the safety, purity, identity, consistency, potency, and stability of a product.

<b>REQUIRED COURSES.....Units</b>	<b>Option A.....Units</b>
BIOT 001 Principles of Biotechnology..... 3	BIO 002 Principles of Cell and Molecular Biology..... 5
BIOT 052 Business, Regulatory and quality Practices in Biotechnology ..... 3	CHEM 001 General Chemistry I ..... 5
BIOT 062 Cell Culture and Protein Recovery ..... 4	<b>Option B .....Units</b>
BIOT 063 Biotechnology Instrumentation: Quality Control & Genetic Engineering..... 4	BIO 014 Principles of Microbiology ..... 4
Choose Option A, B or C ..... 4-10	CHEM 010 Intermediate Chemistry..... 4
<b>Required Major Total Units.....18-24</b>	<b>Option C .....Units</b>
	BIOT 160 Basic Concepts/Methods in Biotechnology ..... 4

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

# Biotechnology

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## Biotechnology Laboratory Assistant

*Certificate of Achievement*

### Program Description

This program serves as a Bridge to Biosciences, enabling graduates to enter the Solano College Industrial Biotechnology program or to enter an entry level position in a biotechnology company. It serves as a stackable certificate that may be followed by the Industrial Biotechnology Certificate. A Laboratory Assistant may be hired by life science related companies to prepare buffers, prepare media, operate routine laboratory equipment, and to clean glassware.

The Certificate of Achievement can be obtained upon completion of the 14-unit major 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 Biotechnology Laboratory Certificate of Achievement will be able to:

1. Demonstrate the ability to perform routine laboratory techniques including buffer preparation, media preparation, and aseptic microbial culture.
2. Demonstrate the ability to perform mathematical (algebraic) operations required for calculations important in chemistry and biology.
3. Demonstrate the ability to read and write in a range of writing style categories typical of laboratory and scholarly environments, including lab reports, expository texts, and research-based arguments.

### REQUIRED COURSES.....Units

BIOT 160 Basic Concepts/Methods in Biotechnology .... 4

MATH 330 Elementary Algebra ..... 5

ENGL 360 Focused English Fundamentals ..... 5

**Total Units: .....14**

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Biotechnology Laboratory Assistant."

# Biotechnology

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## Stem Cells and Cell-Based Technologies

*Certificate of Achievement*

### 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.

The Certificate of Achievement can be obtained by completing the 24-29-unit major. All courses 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

Students who complete the Stem Cells and Cell-Based Technologies Certificate of Achievement will be able to:

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

**Total Units: .....24-29**

### Biomanufacturing: ..... Units

BIOT 062 Cell Culture and Protein Recovery ..... 4

BIOT 065 Biomanufacturing Fundamentals ..... 1

### Biology ..... Units

BIO 002 Cell and Molecular Biology ..... 5

BIO 014 Principles of Microbiology ..... 4

### Chemistry ..... Units

CHEM 001 General Chemistry ..... 5

CHEM 010 Intermediate Chemistry ..... 4

CHEM 012 Chemistry for the Health Sciences ..... 5

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Stem Cells and Cell-Based Technologies."

# Business Department

## DEGREES:

Business Administration (AS-T)  
Business, General (AS)  
Business-Insurance: Property & Casualty (AS)  
Management (AS)  
Retail Management (AS)  
Small Business Management (AS)  
Marketing (AS)  
Administrative Assistant (AS)

## CERTIFICATES OF ACHIEVEMENT

Administrative Assistant  
Business, General  
Business-Insurance: Property & Casualty  
Management  
Retail Management  
Small Business Management  
Marketing  
Administrative Assistant  
Medical Front Office Clerk

## JOB-DIRECT LOW UNIT CERTIFICATES

Insurance Specialist

## COURSES:

BUS (Business)  
BSOT (Office Technology/  
Business Information Worker)  
MGMT (Management)  
MKT (Marketing)  
OT (Office Technology)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

**Faculty Contact:** LaVonne Slaton  
Jeanette McCarthy

## P.A.C.E. - BUSINESS AND MANAGEMENT - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE (All Programs)

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to influence, lead or manage to reach your personal or organizational goals and/or economic gain?
- ...enjoys facts, numbers, and details?
- ...likes to carry out tasks in detail or to follow through on other's instructions?
- ...is interested in learning about how to turn your ideas into a sustainable business?

## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE (Administrative Assistant)

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

## Guided Pathways:

# BUSINESS ADMINISTRATION AS-T

Associate in Science for Transfer | GE Pattern: IGETC | Program Total Units: 61

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Administrative Service Manager • General Operations Manager • Industrial Production Manager • Management • Analysis Sales Manager

## What your potential plan could look like...

### 1 First Semester Total Recommended Units: 16

- ENGL 001 College Composition (IGETC 1A) 4 units
- LR 010 Introduction to Library Research 1 unit
- ACCT 001 Introduction to Accounting 4 units
- MATH 011 Statistics (IGETC 2) 4 units
- BUS 005 Introduction to Business 3 units

### 3 Third Semester Total Recommended Units: 12

- ECON 001 Principles of Econ, Macroeconomics (IGETC 4) 3 units
- BUS 018 Legal Environment 3 units
- IGETC 5B Suggested: BIO 012, 016, 018, 020, OR 025 3 units
- HIST 017, 018, 028, 029, or 037 (IGETC 3B/American Institutions) 3 units

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester Total Recommended Units: 15

- ENGL 002 or 004 (IGETC 1B) 4 units
  - CIS 001 or CIS 050\* Intro Computer Science or Microcomputer Apps\* 3 units
  - ACCT 002 Managerial Accounting 3 units
  - IGETC 5A/5C Suggested ASTR 010 & 020, GEOL 001 & 002, or GEOG 001 & 001L 4 units
- \*Applies To CSU Transfer Only

### 4 Fourth Semester Total Recommended Units: 12

- ECON 002 Principles of Econ, Microeconomics (IGETC 4) 3 units
- PLSC 001 or 005 (IGETC 4/American Institutions) 3 units
- MATH 030 Analytical Geometry and Calculus 3 units
- ART 012, CINA 011, MUSC 013, or THEA 013 (IGETC 3A/Cross Cultural) 3 units

### Courses Below May Be Taken Any Time (Fall, Spring or Summer) Total Recommended Units: 6

- COMM 001, 002, or 006 (IGETC 1C) 3 units
- IGETC 3A or 3B 3 unit

NOTE: Whether Or Not Student Has Taken Foreign Language Will Determine If Anything Is Needed This Semester For "IGETC 3A or 3B."

# Business

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

### Program Description

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

Students who earn the Associate in Science in Business Administration for Transfer will receive guaranteed priority admission to the CSU system, but not to a particular campus or major. Once admitted the student will only be required to complete 60 additional upper-division units to qualify for a BA degree.

### To earn the Associate in Science in Business Administration for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Science in Business Administration for Transfer will be able to:

1. Recognize and describe the importance of marketing, law, economics, accounting, business administration, finance, risk analysis, and personnel management in business and formulate hypotheses based on these concepts.
2. Analyze practical business problems and utilize research and critical thinking to evaluate and recommend alternative solutions.
3. Use appropriate computer software to create and or modify relevant business documents.
4. Apply accounting concepts and principles in making business decisions.

### REQUIRED COURSES.....Units

ACCT 001 Principles of Accounting – Financial.....	4
ACCT 002 Principles of Accounting – Managerial.....	4
BUS 005 Introduction to Business .....	3
BUS 018 Legal Environment of Business .....	3
ECON 001 Principles of Economics (Macroeconomics) ..	3
ECON 002 Principles of Economics (Microeconomics) ...	3
MATH 011 Elementary Statistics.....	4
CIS 001 Introduction to Computer Science .....	3
or	
CIS 050 Microcomputer Applications .....	3
<b>Required Major Total Units.....</b>	<b>27</b>

# Business

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## Business, General

*Certificate of Achievement and Associate in Science*

### Program Description

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

The Certificate of Achievement can be obtained by completing the 23-25-unit major. The Associate in Science can be obtained upon completion of the 23-25-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Business, General Certificate of Achievement/Associate in Science will be able to:

1. Recognize and describe the importance of marketing, law, economics, accounting, business administration, finance, risk analysis, and personnel management in business and formulate hypotheses based on these concepts.

REQUIRED COURSES.....	Units
ACCT 001 Principles of Accounting - Financial.....	4
ACCT 002 Principles of Accounting - Managerial.....	4
BUS 005 Introduction to Business .....	3
BUS 018 Legal Environment of Business .....	3
CIS 001 Introduction to Computer Science .....	3
or	
CIS 050 Microcomputer Applications .....	3
ECON 001 Principles of Economics (Macroeconomics) ..	3
or	
ECON 002 Principles of Economics (Microeconomics) ...	3
3-5 units from List A .....	3-5
<b>Required Major Total Units.....</b>	<b>23-25</b>

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

*\*Suggested math courses for the major are MATH 011 OR MATH 030.*

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This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Business, General."

# Business

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## Business-Insurance: Property & Casualty

*Certificate of Achievement and Associate in Science*

### Program Description

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

The Certificate of Achievement can be obtained by completing the 31-unit major. The Associate in Science can be obtained upon completion of the 31-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Business-Insurance: Property & Casualty Certificate of Achievement/Associate in Science will be able to:

1. Understand the insurance process, the segments of insurance, and the consequences of insurance contracts in mitigating loss.
2. Understand the risk management techniques available to handle exposure to loss and the use of risk modification.
3. Understand the financial and human consequences of loss. Proper and casualty exposures.
4. Apply the insurance principles in potential and real business and personal loss exposures.
5. Understand the exposures to loss faced by an individual and/or corporation.

### REQUIRED COURSES.....Units

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

This is a Gainful Employment Program. For additional information, please visit

[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Business Insurance: Property & Casualty."

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## Insurance Specialist

*Job-Direct Low Unit Certificate*

### REQUIRED COURSES.....Units

BUS 070 Introduction to Insurance .....	1
BUS 071 Principles of Property and Liability Insurance..	3
BUS 072 Personal Insurance .....	3
BUS 073 Commercial Insurance .....	3
BUS 074 Insurance—Code & Ethics .....	1
<b>Total Units.....</b>	<b>11</b>

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# Business

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## Management

*Certificate of Achievement and Associate in Science*

### Program Description

This program is designed to emphasize training to improve thought processes and to provide familiarity with the analytical tools of management, sound decision-making, and how to get things done through and with people. Also, this option is designed for initial employment upon graduation and for job advancement opportunities.

The Certificate of Achievement can be obtained by completing the 21-unit major. The Associate in Science can be obtained by completing the 21-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Management Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate oral and written skills unique in the business community.
2. Apply leadership, ethical standards, and team building skills necessary for managerial positions in the 21st century.
3. Conduct a personal SWOT analysis for a future small business venture.
4. Design a comprehensive business plan for a future small business venture.
5. Demonstrate the ability to use technology in analyzing and solving business problems.
6. Use basic computation skills to analyze and solve business problems requiring the use of mathematics.

### REQUIRED COURSES ..... Units

*(listed in recommended sequence)*

BUS 005 Introduction to Business .....	3
MGMT 050 Principles of Management .....	3
MGMT 055 Management/Leadership Skills .....	3
MGMT 191 Human Relations .....	3
or	
MGMT 193 Human Resource Management .....	3
BUS 092 Business Communication .....	3
CIS 050 Microcomputer Applications .....	3
BUS 181 Business Mathematics .....	3
<b>Required Major Total Units .....</b>	<b>21</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Management."

# Business

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## Management:

### Retail Management

*Certificate of Achievement and Associate in Science*

#### Program Description

Designed to serve the needs of the employees and employers within the retail industry. The program provides the knowledge and skills needed to prepare students for both entry level jobs and upward mobility opportunities in this dynamic and ever changing segment of our economy. Program emphasis is placed on professional and career development.

The Certificate of Achievement can be obtained by completing the 25-unit major. The Associate in Science can be obtained by completing the 25-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Retail Management Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate oral and written skills unique in the business community.
2. Apply leadership, ethical standards, and team building skills necessary for managerial positions in the 21st century.
3. Conduct a personal SWOT analysis for a future small business venture.
4. Design a comprehensive business plan for a future small business venture.
5. Demonstrate the ability to use technology in analyzing and solving business problems.
6. Use basic computation skills to analyze and solve business problems requiring the use of mathematics.

#### REQUIRED COURSES ..... Units

*(listed in recommended sequence)*

BUS 092 Business Communication .....	3
CIS 050 Microcomputer Applications .....	3
ACCT 001 Principles of Accounting - Financial .....	4
MKT 171 Introduction to Marketing .....	3
MKT 174 Retail Merchandising.....	3
MGMT 191 Human Relations .....	3
MGMT 193 Human Resource Management .....	3

MGMT 050 Principles of Management .....

or

MGMT 055 Management/Leadership Skills .....

**Required Major Total Units .....25**

*NOTE: This program is approved by the Western Association of food chains for awarding of the industry WAFC Certificate.*

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Retail Management."

# Business

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## Management:

### Small Business Management

*Certificate of Achievement and Associate in Science*

#### Program Description

This program is designed for those planning to start their own business, buy an existing business, buy a franchise, or who already own their own business. This option emphasizes learning the concepts and practical skills necessary to be a successful, professional entrepreneur. Specifically designed for working adults, the courses emphasize a systematic approach to business which focuses on the integration of theoretical and practical skills.

The Certificate of Achievement can be obtained by completing the 28-unit major. The Associate in Science can be obtained by completing the 28-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Small Business Management Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate oral and written skills unique in the business community.
2. Apply leadership, ethical standards, and team building skills necessary for managerial positions in the 21st century.
3. Conduct a personal SWOT analysis for a future small business venture.
4. Design a comprehensive business plan for a future small business venture.
5. Demonstrate the ability to use technology in analyzing and solving business problems.
6. Use basic computation skills to analyze and solve business problems requiring the use of mathematics.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
<i>(listed in recommended sequence)</i>	
MGMT 055 Management/Leadership Skills .....	3
MKT 174 Retail Merchandising .....	3
ACCT 050 Computer Accounting .....	3
BUS 005 Introduction to Business .....	3
BUS 018 Legal Environment of Business .....	3
BUS 181 Business Mathematics .....	3
BUS 182 Small Business Mathematics .....	1
BUS 092 Business Communication .....	3
6 units from List A .....	6
<b>Required Major Total Units</b> .....	<b>28</b>

<b>List A: (select 6 units)</b> .....	<b>Units</b>
ACCT 001 Principles of Accounting - Financial .....	4
ACCT 002 Principles of Accounting - Managerial .....	4
BUS 060 Introduction to International Business .....	3
ECON 001 Principles of Economics (Macroeconomics) ..	3
ECON 002 Principles of Economics (Microeconomics) ...	3
MGMT 055 Management/Leadership Skills .....	3
MGMT 191 Human Relations .....	3
MKT 173 Principles of Selling .....	3
MKT 174 Retail Merchandising.....	3
OCED 090 Occupational Work Experience .....	2-3
OCED 091 General Work Experience .....	2-3
OT 054A Beginning Keyboarding A .....	1.5
OT 054B Beginning Keyboarding B .....	1.5
OT 055A Intermediate Keyboarding/ Word Processing A .....	1.5
OT 055B Intermediate Keyboarding/ Word Processing B .....	1.5

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Small Business Management."

# Business

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## Marketing

*Certificate of Achievement and Associate in Science*

### Program Description

Marketing involves a variety of activities including selection of target customer, product development, promotion, pricing and distribution. It applies equally to services, ideas, non-profit organizations, and the individual.

The Certificate of Achievement can be obtained by completing the 30-unit major. The Associate in Science can be obtained by completing the 30-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Marketing Certificate of Achievement/Associate in Science will be able to:

1. Apply marketing research principles to a company's product or service.
2. Apply advertising principles to promote a firm's image and product/service offering.
3. Develop a marketing plan for a business using the fundamental elements of the marketing mix.

### REQUIRED COURSES .....Units

BUS 005 Introduction to Business ..... 3

BUS 018 Legal Environment of Business ..... 3

BUS 181 Business Mathematics ..... 3

CIS 001 Introduction to Computer Science ..... 3

or

CIS 050 Microcomputer Applications ..... 3

ECON 002 Principles of Economics (Microeconomics) .. 3

MGMT 050 Principles of Management ..... 3

or

MGMT 191 Human Relations ..... 3

MKT 171 Introduction to Marketing ..... 3

MKT 172 Market Management and Planning ..... 3

MKT 173 Principles of Selling ..... 3

MKT 174 Retail Merchandising ..... 3

**Required Major Total Units .....30**

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Marketing."

# Business

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## Office Technology: Administrative Assistant

*Certificate of Achievement and Associate in Science*

### Program Description

This program is designed to develop technical and communication skills required for management support. Computer literacy, keyboarding skills, document formatting, proofreading and grammatical skills, presentation skills, spreadsheet, and organizational skills are emphasized.

The Certificate of Achievement can be obtained by completing the 30.5-unit major. The Associate in Science can be obtained by completing the 30.5-unit major, General Education, and electives as needed to complete a minimum of 60 units. All courses for 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 Administrative Assistant Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate mastery of the alpha and numeric typewriting keyboard.
2. Demonstrate mastery in the keyboarding of correspondence, manuscripts, and compositions under timed conditions with established accuracy and formatting standards using proper techniques.
3. Develop a high degree of competency and a broad knowledge of skills as they relate to general office procedures.

### REQUIRED COURSES: ..... Units

*(listed in recommended sequence)*

CIS 066 Microsoft Word .....	3
CIS 001 Introduction to Computer Science .....	3
or	
CIS 050 Microcomputer Applications .....	3
BUS 092 Business Communication .....	3
CIS 073 Microsoft Excel .....	3
OT 151 Office Systems & Procedures .....	3
OCED 090 Occupational Work Experience .....	1
CIS 090 Introduction to PowerPoint .....	1.5
CIS 091 Microsoft Outlook .....	1.5
OT 054A Beginning Keyboarding A .....	1.5
OT 054B Beginning Keyboarding B .....	1.5
OT 055A Intermediate Keyboarding/ Word Processing A .....	1.5
OT 055B Intermediate Keyboarding/ Word Processing B .....	1.5
OT 162 Ten-Key .....	1
BUS 097 Work Readiness .....	1.5
BUS 181 Business Mathematics .....	1
OT 056 Business Grammar and Proofreading .....	2

**Required Major Total Units: .....30.5**

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Office Technology Administrative Assistant."

# Business

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## Office Technology:

### Medical Front Office Clerk

*Certificate of Achievement*

#### Program Description

The goal of this program is to prepare students to enter the health care industry at an entry-level position in two semesters.

The Certificate of Achievement can be obtained upon completion of the 26-unit major. All courses 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 Medical Front Office Clerk Certificate of Achievement will be able to:

1. Demonstrate alpha and numeric keyboarding skills at 40 wpm with established accuracy.
2. Demonstrate computer literacy and word processing skills related to formatting business documents.
3. Use medical terminology for human diseases.
4. Demonstrate the differences in medical insurance and explain the duties of a medical office assistant, HIPPA.
5. Demonstrate ability to type medical documents and facility at using medical software such as Medisoft.
6. Employ the necessary soft skills to apply and find employment and keep it.

#### REQUIRED COURSES: ..... Units

*(listed in recommended sequence)*

#### Semester 1: ..... Units

NURS 111 Medical Terminology .....	3
OT 060 Administrative Medical Assistant .....	3
CIS 066 Microsoft Word.....	3
OT 054A Beginning Keyboarding A.....	1.5
OT 054B Beginning Keyboarding B .....	1.5
CIS 091 Microsoft Outlook.....	1.5

#### Semester 2: ..... Units

BUS 097 Work Readiness.....	1.5
OT 056 Business Grammar and Proofreading .....	2
OT 059 Medical Keyboarding and Computer Applications .....	3
OT 061 Health Insurance .....	3
OT 101 Study of Human Diseases for Medical Assistants .....	3
<b>Required Major Total Units.....</b>	<b>26</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Medical Front Office Clerk."

# Chemistry Department

## DEGREES:

Chemistry (AS)

## COURSES:

CHEM (Chemistry)

## CONTACT INFORMATION:

School of Mathematics and Sciences

**Building:** 2700 Room 2719B

**Phone Number:** (707) 864-7110

**Fax Number:** (707) 646-2054

**Dean:** Joseph Ryan

### Administrative Assistants:

Mathematics: Kayla Kaywood

Sciences: Kelsi Mundell

### Faculty Contact:

Kathleen "Kathy" Conrad

Vahid Eskandari

John Higashi

Kiran Kaur

Oanh Lam

Maria Santiago

## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

## P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

# Guided Pathways: **CHEMISTRY AS**

Associate in Science | GE Pattern: IGETC | Program Total Units: 61 - 63

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Biochemist and Biophysicist • Biochemical Engineer • Chemist • Chemical Engineer • Chemistry Teacher • Chemical Plant and System Operator

## What your potential plan could look like...

### 1 First Semester Total Recommended Units: 15

- ENGL 001** 4 units  
College Composition (IGETC 1A)
- LR 010** 1 unit  
Introduction to Library Research
- MATH 020** 5 units  
Analytic Geometry & Calculus (IGETC 2)
- CHEM 001** 5 unit  
General Chemistry I (IGETC 5A/5C)

### 3 Third Semester Total Recommended Units: 14

- CHEM 003** 5 units  
Organic Chemistry I
- COMM 001, 002, or 006** 3 units  
(IGETC 1C)
- ART 012, CINA 011, MUSC 013, or THEA 013** 3 units  
(IGETC 3A/Cross Cultural)
- HIST 017, 018, 028, 029, or 037** 3 units  
(IGETC 3B/American Institutions)

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester Total Recommended Units: 14

- CHEM 002** 5 units  
General Chemistry II
- PHYS 002 or PHYS 006** 5 units  
Gen Phys non-calculus or Phys for Science Engineering I\*
- ENGL 002 or 004** 4 units  
(IGETC 1B)

### 4 Fourth Semester Total Recommended Units: 14-16

- CHEM 004** 5 units  
Organic Chemistry II
- IGETC 5B** 3 - 5 units  
Suggested: BIO 002
- IGETC 3A or 3B** 3 units
- IGETC 4** 3 units

### Courses Below May Be Taken Any Time (Fall, Spring or Summer) Total Recommended Units: 6

- PLSC 001 or 005** 3 units  
(IGETC 4/American Institutions)
- (IGETC 4)** 3 units  
Suggested: PSYC 001 or SOC 001

\*If you plan to transfer, please see a counselor to ensure you are taking the correct courses. A CHEM BA degree will require PHYS 002; a CHEM BS degree will require MATH 021 and PHYS 006 (and possibly additional courses not listed on this template).

# Chemistry

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## Chemistry

*Associate in Science*

### 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.

The Associate in Science can be obtained by completing the 26-30-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 in Science 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.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
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
<b>Required Major Total Units.....</b>	<b>26-30</b>

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

# Child Development and Family Studies Department

## DEGREES:

Early Childhood Education (AS-T)  
Early Childhood Education (AS)

## CERTIFICATES OF ACHIEVEMENT

Associate Teacher  
Early Childhood Education  
Infant/Toddler Teacher

## COURSES:

CDFS (Child Development and Family Studies)

## CONTACT INFORMATION:

School of Social and Behavioral Sciences

**Building:** 700 Room 729

**Phone Number:** (707) 864-7000 x7251

**Fax Number:** (707) 646-7701

**Dean:** Sandy Lamba

**Administrative Assistant:** Janet Leary

### Faculty Contact:

Anthony "Tony" Ayala

Amy Obegi

Tasha Smith

## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

## P.A.C.E. - EDUCATION, BEHAVIORAL SCIENCE, AND THE SOCIAL WORLD - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to question and explore physical, biological, or cultural happenings?
- ...enjoys using your skills with words to serve people?
- ...likes to observe, learn, analyze, evaluate, or solve problems?
- ...is interested in how social systems and society works?

# Guided Pathways:

## EARLY CHILDHOOD EDUCATION AS-T

Associate in Science for Transfer | GE Pattern: CSU OPT C | Program Total Units: 61 - 61.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

### Career Paths

Childcare Worker • Preschool Teacher • Kindergarten Teacher • Child, Family, or School Social Worker • Education Administrator

### What your potential plan could look like...

1

#### First Semester

Total Recommended Units: 14

- CDFS 038** 3 units  
Child, Growth & Development (CSU GE E)
- CDFS 062** 3 units  
Intro to Early Childhood Education
- ENGL 001** 4 units  
College Composition (CSU GE A2)
- LR 010** 1 unit  
Introduction to Library Research
- CSU GE C1** 3 units

3

#### Third Semester

Total Recommended Units: 13-13.5

- CDFS 054 or NUTR 054** 3 units  
Child Health, Safety, and Nutrition
- CDFS 064** 3 units  
Observation & Assessment
- CDFS 053** 3 units  
Teaching in a Diverse Society (Cross-cultural)
- BIO 015 or 016 & 016L** 4 - 4.5 units  
(CSU GE B2/B3)

Courses Below May Be Taken Any Time  
(Fall, Spring or Summer)

Total Recommended Units: 6

- COMM 001, 002, or 006** 3 units  
(CSU GE A1)
- HIST 017, 018, 028, 029, or 037** 3  
(CSU GE C2/American Institutions)

2

#### Second Semester

Total Recommended Units: 13-14

- ENGL 002 or 004** 4 units  
(CSU GE A3)
- MATH 012 or MATH 011** 3 - 4 units  
(CSU GE B4)
- CDFS 063** 3 units  
Intro to Curriculum
- CDFS 050** 3 units  
Child, Family, and Community (CSU GE D)

4

#### Fourth Semester

Total Recommended Units: 15v

- PLSC 001 or 005** 3 units  
(CSU D/American Institutions)
- CDFS 065** 3 units  
Early Childhood Education Practicum 1
- (CSU GE B1)** 3 units  
Suggested: ASTR, GEOL, GEOG
- (CSU GE D)** 3 units
- (CSU GE C1 or C2)** 3 units

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

# Child Development and Family Studies

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

### Program Description

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

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

### To earn the Associate in Science in Early Childhood Education for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Science in Early Childhood Education for Transfer will be able to:

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

<b>REQUIRED COURSES</b>	<b>Units</b>
CDFS 038 Child Growth and Development.....	3
CDFS 050 Child, Family and Community.....	3
CDFS 053 Teaching in a Diverse Society.....	3
CDFS 054 Child Health, Safety, and Nutrition .....	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices .....	3
CDFS 063 Introduction to Curriculum.....	3
CDFS 064 Observation and Assessment .....	3
CDFS 065 Early Childhood Education Practicum I.....	4
<b>Required Major Total Units.....</b>	<b>25</b>

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

# Child Development and Family Studies

## Early Childhood Education

*Certificate of Achievement and Associate in Science*

### Program Description

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

The Certificate of Achievement can be obtained upon successful completion of the 35-unit major. The Associate in Science can be obtained by completing the 35-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Early Childhood Education Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate an understanding of child development theory, current research, and trends in the field, and their application to responsive practice in early care setting.
2. Implement techniques that strengthen home and school partnerships in order to gain an ecological perspective of children's development.
3. Develop curriculum and early care environments that are derived from unbiased observation and assessment of children's interests and developmental levels.
4. Demonstrate reflective practice in their work with young children by building awareness of self as teacher, child as learner, and early childhood pedagogy.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
CDFS 038 Child Growth and Development.....	3
CDFS 050 Child, Family and Community.....	3
CDFS 053 Teaching in a Diverse Society.....	3
CDFS 054 Child Health, Safety, and Nutrition .....	3
or	
NUTR 054 Child Health, Safety, and Nutrition .....	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices .....	3
CDFS 063 Introduction to Curriculum.....	3
CDFS 064 Observation and Assessment .....	3
CDFS 065 Early Childhood Education Practicum I.....	4
CDFS 066 Early Childhood Education Practicum II.....	4
CDFS 077 Art and Scientific Inquiry for ECE.....	3
CDFS 078 Literacy and Music for ECE .....	3
<b>Required Major Total Units.....</b>	<b>35</b>

Full-time students are advised to enroll in CDFS 038, CDFS 050, CDFS 062, and a required curriculum course (CDFS 077 or 078) during their first semester. Second semester students should take CDFS 054, CDFS 063, and CDFS 064. In the third and fourth semesters, students should take practicum (CDFS 065 and CDFS 066), CDFS 053, and a required curriculum course (CDFS 077 or 078). Students will spend their first semester of ECE Practicum I (CDFS 065) assigned to the Solano College Children's Program. A second semester may be spent either on campus or off campus (CDFS 066). Off campus placements will be made with an approved teacher from the Early Childhood Mentor Project. Prior to the first week of enrollment in CDFS 065 or 066, students will be required to pass a criminal record check and be fingerprinted at District expense.

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Early Childhood Education."

# Child Development and Family Studies

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## Associate Teacher

*Certificate of Achievement*

### Program Description

The Associate Teacher Certificate of Achievement meets the education requirements for the associate teacher level of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing and Community Care Licensing, Title 22 requirements for a fully qualified teacher. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

A Certificate of Achievement can be obtained by completing the 12-unit major with a minimum grade of C in each course or a P if taken on a Pass/No Pass basis.

### Program Outcomes

Students who complete the Associate Teacher Certificate of Achievement will be able to:

1. Understand and apply developmental theories from conception through adolescence.
2. Design a play based curriculum which supports children using developmental, inclusive and anti-bias principles.
3. Identify and analyze quality early childhood practices including professionalism, self-reflection, play-based holistic learning, multiculturalism, and relationship building to ascertain their impact on children's development.
4. Demonstrate the ability to access community resources which support and empower children and families.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
CDFS 038 Child Growth and Development .....	3
CDFS 050 Child, Family and Community.....	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices .....	3
CDFS 063 Introduction to Curriculum.....	3
<b>Required Major Total Units.....</b>	<b>12</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Associate Teacher."

# Child Development and Family Studies

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## Infant/Toddler Teacher

*Certificate of Achievement*

### Program Description

This program provides foundational skills in the care of infants and toddlers. Students gain knowledge of young children's social and emotional needs, how to create partnerships with families to provide culturally consistent and respectful care, and how to develop holistic play-based curriculum. Students will learn how to develop child care environments that are responsive to the needs of young children and skills for responsive interactions. Learning will be grounded in child development theories and knowledge of developmentally appropriate practice.

Students who complete the Certificate of Achievement meet the requirements to become a fully qualified associate teacher according to the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing and Community Care Licensing, Title 22. Additionally, students will have the infant and toddler units mandated by Title 22 to work with children under 3 years of age. Students who wish to work with young children must pass a criminal record fingerprint clearance and show proof of immunization at the time of employment.

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

### Program Outcomes

Students who complete the Associate Teacher Certificate of Achievement will be able to:

1. Understand and apply developmental theories from conception through adolescence.
2. Design a play based curriculum which supports children using developmental, inclusive and anti-bias principles.
3. Identify and analyze quality early childhood practices including professionalism, self-reflection, play-based holistic learning, multiculturalism, and relationship building to ascertain their impact on children's development.
4. Demonstrate the ability to access community resources which support and empower children and families.

### REQUIRED COURSES .....Units

CDFS 038 Child Growth and Development.....	3
CDFS 050 Child, Family and Community.....	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices .....	3
CDFS 063 Introduction to Curriculum.....	3
CDFS 075 Care of Infants and Toddlers: Social and Emotional Foundations.....	3
CDFS 076 Care of Infants and Toddlers: Curriculum and Environments .....	3
<b>Required Major Total Units.....</b>	<b>18</b>

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Infant/Toddler Teacher."

# Communication Studies Department

## DEGREES:

Communication Studies (AA-T)

## CERTIFICATES OF ACHIEVEMENT

Sports Broadcasting

## COURSES:

COMM (Communication Studies)

## CONTACT INFORMATION:

School of Liberal Arts

**Building:** 1300 **Room** 1307B

**Phone Number:** (707) 864-7250

**Fax Number:** (707) 646-2072

**Dean:** Neil Glines

### Administrative Assistants:

Leigh Anne Jones

Donna Meyer

### Faculty Contact:

Evangeline East

Douglas Mungin

Greg Poff

Janene Whitesell



**P.A.C.E. - VISUAL, PERFORMANCE, AND LANGUAGE ARTS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to express yourself creatively and using imagination or intuition?
- ...enjoys feeling free to be inventive without limits?
- ...likes to inform, enlighten, help, or teach, using your skills with words and physicality to serve people?
- ...is interested in self-expression and thinking critically on the world in which we live?

## Guided Pathways:

# COMMUNICATION STUDIES AA-T

Associate in Arts for Transfer | GE Pattern: IGETC | Program Total Units: 61 - 64.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Speech-Language Pathologist • Communication Teacher • Media and Communication • Public Relations Specialist

## What your potential plan could look like...

### 1 First Semester

Total Recommended Units: 14 - 15

- ENGL 001 4 units  
College Composition (IGETC 1A)
- LR 010 1 unit  
Introduction to Library Research
- MATH 011 or 012 3 - 4 units  
(IGETC 2B)
- COMM 001 3 units  
Intro to Public Speaking (IGETC 1C)
- COMM 012 3 unit  
Intercultural Comm (IGETC 4/Cross-cultural)

### 3 Third Semester

Total Recommended Units: 12-14

- COMM 002 3 units  
Fundamentals of Persuasive Speaking
- (IGETC 3A) 3 units
- HIST 017, 018, 028, 029, or 037 3 units  
(IGETC 3B/American Institutions)
- ASL 001, FREN 001, or 3 - 5 units  
SPAN 001, or UC Transferable Elective \*

\*Depends on whether or not student took two years of the same foreign language in high school and passed with a minimum grade of c.

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester

Total Recommended Units: 14-14.5

- ENGL 002 or 004 4 units  
(IGETC 1B)
- COMM 006 3 units  
Argumentation & Debate
- COMM 010 3 units  
Interpersonal Communication
- (IGETC 5A/5C) Suggested: 4 - 4.5 units  
ASTR 010 & 020, GEOL 001 & 002, or GEOG 001/ 001L

### 4 Fourth Semester

Total Recommended Units: 15

- PLSC 001 or 005 3 units  
(IGETC 4/American Institutions)
- (IGETC 5B) Suggested: 3 units  
BIO 012, 016, 018, 020, OR 025
- (IGETC 3A or 3B) 3 units
- UC Transferable Elective 3 units
- UC Transferable Elective 3 units

Courses Below May Be Taken Any Time  
(Fall, Spring or Summer)

Total Recommended Units: 6

- PSYC 001 or SOC 001 3 units  
(IGETC 4)
- UC Transferable Elective 3 unit

# Communication Studies

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

### Program Description

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

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

### To earn the Associate in Arts in Communication Studies for Transfer, a student must:

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

### Program Outcomes

Students who complete the Associate in Arts in Communication Studies for Transfer will be able to:

1. Critically evaluate speeches, debates, and other communicative performances.
2. Comprehend the skills and techniques necessary to be organized, confident communicators in a variety of classroom settings.
3. Understand the process of communication and communication methods in multiple contexts.
4. Communicate utilizing a variety of performance methods.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
COMM 001 Introduction to Public Speaking .....	3
Two courses from List A.....	6
Two courses from List B.....	6
One course from List C .....	3
<b>Required Major Total Units</b> .....	<b>18</b>

<b>List A: (select two courses)</b> .....	<b>Units</b>
COMM 006 Argumentation and Debate.....	3
COMM 008 Group Communication .....	3
COMM 010 Interpersonal Communication .....	3

<b>List B: (select two courses)</b> .....	<b>Units</b>
COMM 002 Fundamentals of Persuasive Speaking .....	3
COMM 012 Intercultural Communication .....	3
COMM 015 Oral Interpretation of Literature .....	3
COMM 050 Forensics/Speech Workshop .....	1-4
COMM 060 Business and Professional Communication.	3
Any List A course not used .....	3

<b>List C: (select one course)</b> .....	<b>Units</b>
ANTH 002 Cultural Anthropology .....	3
COMM 075 Sports Broadcasting .....	3
PSYC 001 Introduction to Psychology .....	3
SOC 001 Introduction to Sociology .....	3
Any List A or List B course not used .....	3

# Communication Studies

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## Sports Broadcasting

*Certificate of Achievement*

### Program Description

This program offers students hands-on experience in the basics of television and internet sports broadcasting. Areas of concentration include performance and technical training for a variety of televised sporting events and productions. The program is geared for those who are interested in obtaining employable skills in a short timeframe, may be completed in one year and serves as a professional development opportunity.

A Certificate of Achievement can be obtained by completing the 12-unit major with a minimum grade of C or a P if taken on a Pass/No Pass basis.

### Program Outcomes

Students who complete the Sports Broadcasting Certificate of Achievement will be able to:

1. Obtain and demonstrate skill set for entry level positions in broadcasting and electronic media productions.
2. Amass a minimum of 200 experience hours working on sports production tasks and to acquire recorded audio/video content to compile a demo tape.
3. Broadcast production assignments totaling 200 hours, exams, self-evaluation journals, and viewer response and evaluations.
4. Demonstrate ability to work as an individual as well as an effective team member on sports productions.

### REQUIRED COURSES ..... Units

COMM 075A Sports Broadcasting – Fall Sports ..... 3

COMM 075B Sports Broadcasting – Spring Sports ..... 3

COMM 080A TV Sports Production – Fall Sports ..... 3

COMM 080B TV Sports Production – Spring Sports ..... 3

**Required Major Total Units.....12**

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Sports Broadcasting"

# Computer Information Science Department

## DEGREES:

Computer Programming (AS)  
Microcomputer Applications (AS)  
Web Design and Development (AS)

## CERTIFICATES OF ACHIEVEMENT

Computer Programming  
Microcomputer Applications  
Web Design and Development

## JOB-DIRECT LOW UNIT CERTIFICATES

Computer Applications Specialist  
Database Specialist  
Digital and Print Publishing  
Digital Media and Web Development  
Microsoft Office Specialist  
Motion Graphic Editor  
Web Programmer

## COURSES:

CIS (Computer Information Science)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

## Faculty Contact:

Kevin Anderson

Mark Berrett

Adrienne Cary

Jeanette McCarthy

John Urrutia

## P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

## P.A.C.E. - BUSINESS AND MANAGEMENT - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to influence, lead or manage to reach your personal or organizational goals and/or economic gain?
- ...enjoys facts, numbers, and details?
- ...likes to carry out tasks in detail or to follow through on other's instructions?
- ...is interested in learning about how to turn your ideas into a sustainable business?

# Computer Information Science

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## Computer Programming

*Certificate of Achievement and Associate in Science*

### Program Description

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

The Certificate of Achievement can be obtained upon completion of the 33-unit major. The Associate in Science may be obtained by completing the 33-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Computer Programming Certificate of Achievement/Associate in Science will be able to:

1. Construct applications that use GUI (graphical user interface) components and access databases for data permanence.
2. Develop a programming solution to a data structure problem using object-oriented methodologies and appropriate data structures and algorithms.
3. Implement a well-designed, properly normalized relational database after analyzing user requirements and business rules.

### REQUIRED COURSES ..... Units

*(listed in recommended sequence)*

CIS 001 Introduction to Computer Science .....	3
BUS 092 Business Communication .....	3
CIS 022 Introduction to Programming .....	3
CIS 055 MS Windows Operating Systems .....	3
CIS 023 Data Structures and Algorithms .....	3
CIS 015 Programming in Visual Basic.NET .....	3
CIS 089 Essential Networking Technologies .....	3
CIS 078 Access - Database Management System .....	3
CIS 052 UNIX Operating System .....	3
CIS 020 Assembly Programming .....	3
3 units from Recommended Electives .....	3

**Required Major Total Units.....33**

### Recommended Electives (select 3 units) ..... Units

ACCT 001 Principles of Accounting - Financial.....	4
ACCT 002 Principles of Accounting – Managerial.....	4
BUS 005 Introduction to Business .....	3
CIS 035 Introduction to Java Programming .....	3
CIS 060 Introduction to the Internet .....	1.5
CIS 061 Creating Web Pages .....	3
CIS 066 Microsoft Word.....	3
CIS 073 Microsoft Excel .....	3
CIS 080 SQL Database Management Systems .....	3
OCED 090 Occupational Work Experience .....	1- 8
OCED 091 General Work Experience.....	1-6

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

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

# Computer Information Science

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## Microcomputer Applications

*Certificate of Achievement and Associate in Science*

### Program Description

This program is designed to prepare the student for employment as a microcomputer applications specialist.

The Certificate of Achievement can be obtained upon completion of the 30-unit major. The Associate in Science may be obtained by completing the 30-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Microcomputer Applications Certificate of Achievement/Associate in Science will be able to:

1. Demonstrate knowledge of application software such as word processing, spread sheets, personal information management, database, operating systems, and networking, presentation and html editors.
2. Understand Visual Basic programming.
3. Demonstrate effective oral and written communication.

### REQUIRED COURSES ..... Units

*(listed in recommended sequence)*

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

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

# Computer Information Science

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## Web Design and Development

*Certificate of Achievement and Associate in Science*

### Program Description

This program is designed to prepare the student for employment as a website designer or developer. Career Opportunities: Web Designer, Web Development, Motion Graphic/Animation Video Editor, Print Designer.

The Certificate of Achievement can be obtained upon completion of the 22.5-unit major. The Associate in Science may be obtained by completing the 22.5-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 Web Design and Development Certificate of Achievement/Associate in Science will be able to:

1. Produce functional web pages replete with responsive web elements.
2. Properly use design elements and an HTML editor in creating web pages.
3. Develop a project incorporating CSS, search forms, tables, photo galleries, shared borders, themes, interactive components, dynamic web pages and publish to a server.
4. Create web elements for print design and production.
5. Create and edit production quality animation and video

<b>REQUIRED COURSES</b> .....	<b>Units</b>
CIS 001 Introduction to Computer Science .....	3
CIS 061 Creating Web Pages .....	3
CIS 062 Creating Web Interactivity with Flash.....	3
CIS 069 Multimedia for the Web .....	3
CIS 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
<b>Required Major Total Units.....</b>	<b>22.5</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Web Design and Development."

# Computer Information Science

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## Computer Applications Specialist

*Job-Direct Low Unit Certificate*

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
<b>Total Units.....</b>	<b>10.5</b>

## Microsoft Office Specialist

*Job-Direct Low Unit Certificate*

REQUIRED COURSES .....	Units
CIS 066 Microsoft Word.....	3
CIS 073 Microsoft Excel .....	3
CIS 078 Access-Database Management System .....	3
CIS 090 Introduction to PowerPoint .....	1.5
CIS 091 Microsoft Outlook .....	1.5
<b>Total Units .....</b>	<b>12</b>

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## Database Specialist

*Job-Direct Low Unit Certificate*

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

## Motion Graphic Editor

*Job-Direct Low Unit Certificate*

REQUIRED COURSES .....	Units
CIS 062 Creating Web Interactivity.....	3
CIS 069 Multimedia for the Web .....	3
CIS 087 Adobe Illustrator for the Web .....	3
<b>Total Units.....</b>	<b>9</b>

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## Digital and Print Publishing

*Job-Direct Low Unit Certificate*

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
<b>Total Units.....</b>	<b>10.5</b>

## Web Programmer

*Job-Direct Low Unit Certificate*

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

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## Digital Media and Web Development

*Job-Direct Low Unit Certificate*

REQUIRED COURSES .....	Units
CIS 061 Creating Web Pages .....	3
CIS 062 Creating Web Interactivity .....	3
CIS 070 Adobe Photoshop for the Web .....	3
CIS 087 Adobe Illustrator for the Web.....	3
<b>Total Units.....</b>	<b>12</b>

# Computer Science Department

## DEGREES

Computer Science (AS-T)

## COURSES:

[CS \(Computer Science\)](#)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

**Faculty Contact:** Mark Berrett



## **P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### **ARE YOU THE KIND OF PERSON WHO...**

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

## **P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### **ARE YOU THE KIND OF PERSON WHO...**

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

# Computer Science

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## 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 Science in Computer Science for Transfer, 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) 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 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.....32**

### Biology (select one course) ..... Units

BIO 002 Cell and Molecular Biology .....	5
BIO 003 Evolution, Ecology, & Biodiversity .....	5

# Cosmetology Department

## DEGREES:

Cosmetology (AS)

## CERTIFICATES OF ACHIEVEMENT

Cosmetology

## COURSES:

COSM (Cosmetology)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton



## P.A.C.E. - BUSINESS AND MANAGEMENT - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to influence, lead or manage to reach your personal or organizational goals and/or economic gain?
- ...enjoys facts, numbers, and details?
- ...likes to carry out tasks in detail or to follow through on other's instructions?
- ...is interested in learning about how to turn your ideas into a sustainable business?

## P.A.C.E. - INDUSTRIAL AND APPLIED TECHNOLOGY - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to work hands-on with objects, machines, tools, plants, or animals?
- ...enjoys work and play outside, including use your physical or athletic abilities?
- ...likes to follow directions to organize, plan and complete a project or task?
- ...is interested in attaining employment as soon as possible?

# Cosmetology

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## Cosmetology

*Certificate of Achievement and Associate in Science*

### Program Description

The Cosmetology program is approved by the California State Board of Barbering and Cosmetology. It is designed to prepare the student to take the California State Board of Cosmetology examination for licensure and is subject to its regulations regarding the education and training of cosmetologists. Units include theory and practice in fundamental skills in all phases of beauty culture. There is no reciprocity for transfer students. All students are required to complete all technical, practical, and program requirements.

The Certificate of Achievement can be obtained by completing the 43.5-unit major. The Associate in Science can be obtained by completing the 43.5-unit major and General Education. 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 Cosmetology Certificate of Achievement/Associate in Science will be able to:

1. Compare and contrast the skills as required by the California State Board of Barbering and Cosmetology.
2. Interpret and apply cosmetology theories.
3. Students will have completed the mandated clinic laboratory hours, technical subjects, practical operations and business fundamentals.

<b>REQUIRED COURSES</b> .....	<b>Units</b>
COSM 100 Cosmetology I .....	17.5
COSM 101 Cosmetology II .....	17.5
COSM 102 Cosmetology III .....	8.5
<b>Required Major Total Units</b> .....	<b>43.5</b>

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Cosmetology."

# Counseling Department

## CERTIFICATES OF ACHIEVEMENT

Transfer Studies with IGETC Emphasis  
Transfer Studies with CSU GE Emphasis

## COURSES

COUN (Counseling)

## CONTACT INFORMATION:

Counseling

**Building:** 400 Room 404

**Phone Number:** (707) 864-7101

**Email:** *[counseling@solano.edu](mailto:counseling@solano.edu)*

**Dean:** Kristin Conner



# Counseling

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## Transfer Studies with IGETC Emphasis

*Certificate of Achievement*

### Program Description

This certificate is designed for students who intend to complete university general education requirements prior to transfer to a University of California (UC) or California State University (CSU) campus. Completion of the Intersegmental General Education Transfer Curriculum will permit a student to transfer from a Solano Community College to a UC or CSU campus generally without the need, after transfer, to take additional lower-division, general education courses to satisfy campus general education requirements.

The Certificate of Achievement can be obtained by completing a minimum of 34-37-units from the Intersegmental General Education Transfer Curriculum (IGETC) Pattern. All courses for this certificate must be completed with a minimum grade of C or a P if taken on a Pass/No Pass basis.

**REQUIRED COURSES** ..... **Units (minimum)**  
*See Intersegmental General Education Transfer Curriculum (IGETC) Pattern.*

Area 1 .....	6-9
Area 2 .....	3
Area 3 .....	9
Area 4 .....	9
Area 5 .....	7
<b>Total Units</b> .....	<b>34-37</b>

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## Transfer Studies with CSU GE Emphasis

*Certificate of Achievement*

### Program Description

This certificate is designed for students who intend to complete university general education requirements prior to transfer to a California State University (CSU) campus. Completion of the CSU GE-Breadth (California State University General Education – Breadth) will permit a student to transfer from a Solano Community College to a CSU campus generally without the need, after transfer, to take additional lower-division, general education courses to satisfy campus general education requirements.

The Certificate of Achievement can be obtained by completing a minimum of 39-units from the CSU GE-Breadth (California State University General Education-Breadth) Pattern. All courses for this certificate must be completed with a minimum grade of C or a P if taken on a Pass/No Pass basis.

**REQUIRED COURSES** ..... **Units (minimum)**  
*See CSU GE-Breadth (California State University General Education-Breadth) Pattern.*

Area A.....	9
Area B.....	9
Area C.....	9
Area D.....	6
Area E.....	3
Area F.....	3
<b>Total Units</b> .....	<b>39</b>

# Criminal Justice Department

## DEGREES:

Administration of Justice (AS-T)  
Criminal Justice, Corrections (AS)  
Criminal Justice, Law Enforcement (AS)

## CERTIFICATES OF ACHIEVEMENT

Criminal Justice, Corrections  
Criminal Justice, Law Enforcement

## COURSES:

CJ (Criminal Justice)

## CONTACT INFORMATION:

School of Applied Technology and Business

**Building:** 500 Room 509

**Phone Number:** (707) 864-7229

**Fax Number:** (707) 864-7190

**Dean:** Lisa Neeley

**Administrative Assistant:** Jill Crompton

## P.A.C.E. - EDUCATION, BEHAVIORAL SCIENCE, AND THE SOCIAL WORLD - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to question and explore physical, biological, or cultural happenings?
- ...enjoys using your skills with words to serve people?
- ...likes to observe, learn, analyze, evaluate, or solve problems?
- ...is interested in how social systems and society works?

## P.A.C.E. - HEALTH AND HUMAN SERVICES- A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to inform, enlighten, help, teach, counsel, or cure people?
- ...enjoys using your skills to serve people?
- ...Likes to work hands-on with objects, machines, and tools and/or use your physical or athletic abilities?
- ...is interested in working in a medical environment?

## Guided Pathways:

# ADMINISTRATION OF JUSTICE AS-T

Associate in Science for Transfer | GE Pattern: CSU GE | Program Total Units: 62-67.5

This program map represents **one possible pathway**. See a counselor to create a customized education plan. Map is for the 2021-2022 catalog year.

## Career Paths

Police Detective • Lawyer • Criminal Investigator and Special Agent • Substance Abuse and Behavioral Disorder Counselor • Mental Health and Substance Abuse Social Worker • Criminal Justice and Law Enforcement Teacher

## What your potential plan could look like...

### 1 First Semester Total Recommended Units: 15

- ENGL 001 4 units  
College Composition (IGETC 1A)
- LR 010 1 unit  
Introduction to Library Research
- CJ 001 3 units  
Intro to Criminal Justice (CSU GE D)
- MATH 011 4 units  
Statistics (CSU GE B4)
- COMM 001, 002, or 006 3 units  
CSU GE AREA A1

### 3 Third Semester Total Recommended Units: 13-15.5

- CSU GE C2\* 3 - 5 units
- BIO 012 & 012L, 015 or 016 & 016L 3 units  
(CSU GE B2/B3)
- ART 012, CINA 011, MUSC 013, or THEA 013 3 units  
(CSU GE C1/Cross Cultural)
- HIST 017, 018, 028, 029, or 037 4 - 4.5 units  
(CSU GE C2/American Institutions)

\*Depends on whether or not student took two years of the same foreign language in high school and passed with at least a "C"

Square, darker color:  
Required Courses/  
Courses in Discipline

Rounded, lighter color:  
GE Courses/Categories

### 2 Second Semester Total Recommended Units: 16

- ENGL 002 or 004 4 units  
(IGETC 1B)
- CJ 002 3 units  
Concepts of Criminal Law
- CJ 011 3 units  
Community Relations
- PLSC 001 or 005 3 units  
CSU AREA D/AMERICAN INSTITUTIONS
- CSU GE B1 3 units  
Suggested: ASTR, GEOL, GEOG

### 4 Fourth Semester Total Recommended Units: 12-15

- CJ 051 5 units  
Criminal Investigation
- PSYC 001 3 units  
Introduction to Psychology (CSU GE D)
- CJ 056 3 units  
Juvenile Procedures
- ASL 002, FREN 002, or SPAN 002 3 - 5 units

### Courses Below May Be Taken Any Time (Fall, Spring or Summer) Total Recommended Units: 6

- SOC 001 3 units  
Intro to Sociology (CSU GE D)
- CSU GE E 3 units

# Criminal Justice

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

### Program Description

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

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

### To earn the Associate in Science in Administration of Justice for Transfer, students must:

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

### Program Outcomes

Students who complete the Associate in Science in Administration of Justice for Transfer will be able to:

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

<b>REQUIRED COURSES</b>	<b>Units</b>
CJ 001 Introduction to Criminal Justice	3
CJ 002 Concepts of Criminal Law	3
Select Two Courses from List A	6
Select Two Courses from List B	6

<b>List A (select two courses)</b>	<b>Units</b>
CJ 011 Community Relations	3
CJ 051 Criminal Investigation	3
CJ 053 Legal Aspects of Evidence	3
CJ 056 Juvenile Procedures	3

<b>List B (select two courses)</b>	<b>Units</b>
CJ 064 Principles and Procedures of the Criminal Justice System	3
PSYC 001 Introduction to Psychology	3
SOC 001 Introduction to Sociology	3
<b>Required Major Total Units</b>	<b>18</b>

# Criminal Justice

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## Criminal Justice, Corrections

*Certificate of Achievement and Associate in Science*

### 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.

The Certificate of Achievement can be obtained upon completion of the 30-unit major. The Associate in Science can be obtained upon completion of the 30-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 in Science 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

<b>REQUIRED COURSES</b> .....	<b>Units</b>	<b>List A: (Select 6 units)</b> .....	<b>Units</b>
CJ 001 Introduction to Criminal Justice .....	3	CJ 057 Criminal Justice Career Development .....	3
CJ 002 Concepts of Criminal Law .....	3	CJ 060 Probation and Parole.....	3
CJ 011 Community Relations.....	3	CJ 062 Legal Aspects of Correction.....	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		
<b>Required Major Total Units.....</b>	<b>30</b>		

This is a Gainful Employment Program. For additional information, please visit [http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Criminal Justice: Corrections."

# Criminal Justice

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## Criminal Justice, Law Enforcement

*Certificate of Achievement and Associate in Science*

### 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.

The Certificate of Achievement can be obtained upon completion of the 30-unit major. The Associate in Science can be obtained upon completion of the 30-unit major, General Education, and electives as needed to complete a minimum of 60 units. 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 in Science 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

This is a Gainful Employment Program. For additional information, please visit  
[http://www.solano.edu/gainful\\_employment/](http://www.solano.edu/gainful_employment/) and select "Criminal Justice: Law Enforcement."