

COMPUTER SCIENCE

Associate in Arts

Transfer Preparation* (Major Code: 01180)

Most careers in computer science require a bachelor's degree, and some require a graduate-level degree. The coursework for this associate degree prepares students who plan to transfer and major in computer science with the lower-division computer programming and mathematics coursework required by most colleges and universities.

The program of study listed below is for students interested in the programming or software aspect of computer science. It is designed to provide a strong foundation in mathematics, programming methodology and skills, and computer organization.

Program Student Learning Outcome

- Recognize and appropriately apply current and historical Software Engineering design patterns, algorithms, and data structures to produce efficient, well-engineered software products.

First Semester		Units
MATH 130	INTRODUCTION TO COMPUTER PROGRAMMING	4
MATH 250	ANALYTIC GEOMETRY AND CALCULUS I	5
Units		9
Second Semester		Units
MATH 140	DATA STRUCTURES AND ALGORITHMS	4
MATH 251	ANALYTIC GEOMETRY AND CALCULUS II	4
Units		8
Third Semester		Units
MATH 252	ANALYTIC GEOMETRY AND CALCULUS III	4
MATH 230	COMPUTER ORGANIZATION AND ARCHITECTURE	4
Units		8
Fourth Semester		Units
MATH 254	INTRODUCTION TO LINEAR ALGEBRA	3
MATH 265	DISCRETE STRUCTURES	3
Units		6
Total Units		31

Code	Title	Units
Recommended Electives		
MATH 253	INTRODUCTION TO DIFFERENTIAL EQUATIONS	3
Select one of the following:		6-12
PHYS 270 & PHYS 272 & PHYS 274	PRINCIPLES OF PHYSICS I and PRINCIPLES OF PHYSICS II and PRINCIPLES OF PHYSICS III	
CHEM 200 & CHEM 210	GENERAL CHEMISTRY I and GENERAL CHEMISTRY II	
BIOL 210 & BIOL 211 & BIOL 212	GENERAL ZOOLOGY and INTRODUCTION TO CELL AND MOLECULAR BIOLOGY and BIOLOGY OF PLANTS	

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Career and Transfer Connections. See catalog Transfer Courses Information (<http://catalog.swccd.edu/student-success-support-program/student-services-and-college-services/other-services/transfer-courses/>) section for further information.

To earn an associate degree, additional general education and graduation requirements (<http://catalog.swccd.edu/certificates-certifications-degrees-csuuc-requirements/>) must be completed.