Computer Information Systems: Programming Certificate
Focus: Database Concentration

Computers are ubiquitous. They are in our hospitals, our educational institutions, our businesses, and our homes. In CIS you will explore how digital solutions are analyzed, developed, and implemented into artifacts that humans use every day.

Please see a Pathways Counselor: A local degree requires a minimum of 60 degree-applicable units with a minimum 2.0 GPA overall. Contact a Counselor to create an education plan customized to meet your needs.

Transfer Majors/Award Focus
- Computer Science, A.S.-T CSU, CSUSM, UC
- Computer Information Systems, A.S., Focus: Authoring, Networking, Programming: General, Database, Web
- Internet Authoring, Networking, Programming Certificate

GE Pattern/Units
- GE Pattern: n/a
- Total Units: 21

Program maps indicate the major coursework and recommended general education courses to fulfill your degree in 2 years (approximately 15 units/semester or 30 units/year). If you are a part-time student, start Semester 1 courses and follow the course sequence. Some of the courses listed may be substituted by another course. Please view these options in the official course catalog.

Semester 1   9 Units

	COURSE	TITLE	UNIT
☐	CSIS-116E	Python Programming - Level 1	3
☐	CSIS-126E	Python Programming - Level 2[1]	3
☐	CSIS-101	Introduction to Computers and Data Processing	3

Semester 2   12 Units

	COURSE	TITLE	UNIT
☐	CSIS-201	System Analysis and Design	3
☐	CSIS-118B	Computer Organization & Assembly Language	3
☐	CSIS-514A	SQL Programming - Level 1	3
☐	CSIS-124A	SQL Programming - Level 2 [2]	3

Notes:
[1] AREA G (Math Competency) can be demonstrated by a high school math course at or above the level of Algebra 2 with a grade of C or better.
[2] Take second 8 weeks.

Work Experience
Sign up for a special project or internship opportunity. Gain work experience and earn credits.

Career Options
Networking & IT Administration (A, B)
Web Development, Programming (A, B)
Find more careers: msjc.emsicc.com
Required Education: SM: some college; C: Certificate; A: Associate, B: Bachelor's, M: Master's; D: Doctorate

Financial Aid
Financial aid is determined by the number of credit hours you take in a semester. Maximize your financial aid by taking 12-15 units per semester.