

# SCIENCE, MATH & ENGINEERING PATHWAY PROGRAM MAP: CATALOG YEAR: 2022-23

## *Computer Information Systems: Associate in Science – Non-Transfer Focus: Programming General*

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. As a CIS graduate, the world will be your oyster. Your skills are in great demand in all fields of business, industry, and education.

**Please see a Pathways Counselor:** Create an education plan customized to meet your needs. [Contact a Counselor](#)

### **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: Option A
- Total Units: 60



**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**

**14 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGL-101	College Composition	4
<input type="checkbox"/>	MATH-105	College Algebra	4
<input type="checkbox"/>	CSIS-101 or CSIS 111B	Introduction to Computers and Data Processing or Fundamentals of Computer Programming	3
<input type="checkbox"/>	CSCR-100	College Success and Career Readiness	3

### **Semester 2**

**15 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	CSIS-113A	C++ Programming - Level 1	3
<input type="checkbox"/>	PS-101	Introduction to American Government and Politics	3
<input type="checkbox"/>	GEOG-108	World Regional Geography	3
<input type="checkbox"/>	CSIS-201	System Analysis and Design	3
<input type="checkbox"/>	ART-100	Art Appreciation	3

### **Career Options**

Networking & IT Administration (A, B)  
Web Development (A, B)  
Programming (A, B)

Find more careers: [msjc.emsicc.com](http://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.

**Semester 3****16 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	CSIS-118B	Computer Organization & Assembly Language	3
<input type="checkbox"/>	CSIS-123A	C++ Programming - Level 2 <sup>1</sup>	3
<input type="checkbox"/>	BIOL-100 or BIOL-115	Human Biology or Topics in Biology	4
<input type="checkbox"/>	CSIS-160	Information Security Systems	3
<input type="checkbox"/>	COMM-103	Interpersonal Communication	3

**Semester 4****15 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	CSIS-115A or CSIS-114A	Web Development - Level 1 or SQL Programming - Level 1	3
<input type="checkbox"/>	CSIS-525 or CSIS-211 or CSIS-124A	Web Development - Level 2 <sup>1</sup> or Introduction to Data Structures and Algorithms <sup>1</sup> or SQL Programming - Level 2 <sup>1</sup>	3
<input type="checkbox"/>	CSIS-113C	C# Programming - Level 1	3
<input type="checkbox"/>	CSIS-123C	C# Programming - Level 2 <sup>1</sup>	3
<input type="checkbox"/>	ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3

**Notes:**

<sup>1</sup>Take second 8 weeks: CSIS-525 Web Development - Level 2, CSIS-211 Introduction to Data Structures and Algorithms, CSIS-124A SQL Programming - Level 2, CSIS-123A C++ Programming - Level 2

**Work Experience**

Sign up for a special project or internship opportunity. Gain [work experience](#) and earn credits.