

# PROGRAMMING CERTIFICATE

This certificate is a viable program of study for working professionals who are looking to improve their standing in the workplace by 1) gaining a better understanding of information technologies or 2) by the acquisition of specific job skills.

CT.CIS.PROG.98

## Program Map Design Your Future!

Begin by exploring MSJC program maps to find a career or transfer (<https://msjc.emsicc.com/?radius=&region=All%20Regions>) opportunities. Program maps show the recommended sequence of courses that lead to graduation or transfer. The maps were developed by program experts to give you the skills and knowledge you need to succeed.

- **Starting in Spring?** Choose Fall Semester 1 courses.
- **Are you a part-time student?** Start Fall Semester 1 courses and follow the course sequence.

This program provides students with focused program options. A focused program map contains courses that help students specialize in a distinct area and connects to careers. Talk to a counselor about preparing for transfer to specific schools.

### General and Engineering Concentration

Fall Semester 1		Units
CSIS-113A or CSIS-113C	C++ Programming - Level 1 or C# Programming - Level 1 (formerly C# Programming)	3
CSIS-123A or CSIS-123C	C++ Programming - Level 2 <sup>1</sup> or C# Programming - Level 2	3
CSIS-101	Introduction to Computers and Data Processing	3
<b>Units</b>		<b>9</b>
Spring Semester 1		Units
CSIS-201	System Analysis and Design	3
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-111B	Fundamentals of Computer Programming	3
CSIS-211	Introduction to Data Structures and Algorithms	3
<b>Units</b>		<b>12</b>
<b>Total Units</b>		<b>21</b>

<sup>1</sup> Take in second 8 weeks

### Web Concentration

Fall Semester 1		Units
CSIS-113B	Java Programming - Level 1	3
CSIS-123B	Java Programming - Level 2 (formerly JAVA Programming - Level 2) <sup>1</sup>	3
CSIS-101	Introduction to Computers and Data Processing	3
<b>Units</b>		<b>9</b>

### Spring Semester 1

CSIS-201	System Analysis and Design	3
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-115A	Web Development - Level 1	3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	3
<b>Units</b>		<b>12</b>
<b>Total Units</b>		<b>21</b>

<sup>1</sup> Take in second 8 weeks

### Database Concentration

Fall Semester 1		Units
CSIS-116E	Python Programming - Level 1	3
CSIS-126E	Python Programming - Level 2 <sup>1</sup>	3
CSIS-101	Introduction to Computers and Data Processing	3
<b>Units</b>		<b>9</b>
Spring Semester 1		Units
CSIS-201	System Analysis and Design	3
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-114A	SQL Programming - Level 1	3
CSIS-124A	SQL Programming - Level 2 <sup>1</sup>	3
<b>Units</b>		<b>12</b>
<b>Total Units</b>		<b>21</b>

<sup>1</sup> Take in second 8 weeks

## Requirements

Course	Title	Credits
<b>Required Courses</b>		
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-201	System Analysis and Design	3
Subtotal		6
<b>Programming Elective Courses</b>		
Select a Level 1 & Level 2 course from the same language:		6
CSIS-113A & CSIS-123A	C++ Programming - Level 1 and C++ Programming - Level 2	
CSIS-113B & CSIS-123B	Java Programming - Level 1 and Java Programming - Level 2 (formerly JAVA Programming - Level 2)	
CSIS-113C & CSIS-123C	C# Programming - Level 1 (formerly C# Programming) and C# Programming - Level 2	
CSIS-116E & CSIS-126E	Python Programming - Level 1 and Python Programming - Level 2	
Subtotal		6
<b>Additional Elective Courses</b>		
Select two of the following:		6
CSIS-111B	Fundamentals of Computer Programming	
CSIS-114A	SQL Programming - Level 1	

CSIS-115A	Web Development - Level 1	
CSIS-124A	SQL Programming - Level 2	
CSIS-211	Introduction to Data Structures and Algorithms	
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	
CSIS-786	Developing ASP.NET Web Applications (formerly CSIS-086)	
Subtotal		6
<b>Total Units</b>		<b>18</b>

Help a Student Fund (optional) - \$4 a year or \$2 a semester

Student Health Center Fee - \$46 a year or \$23 a semester

\*For summer session fees and non-CA resident tuition, please see: <https://www.msjc.edu/StudentServices/EnrollmentServices/Pages/What-Fees-do-I-have-to-pay.aspx>

## Career Exploration

Discover information about careers that interest you!

1. Take a Career Quiz (<https://msjc.emsicc.com/assessment/>) to learn about yourself and receive career suggestions based on your interests.
2. Search available in-demand jobs (<https://msjc.emsicc.com/browse-careers/>) in your career areas of interest and find up-to-date salaries and education requirements.
3. Find the MSJC Program (<https://msjc.emsicc.com/browse-programs/>) that connects your interests to a career.

Note: There are no guaranteed positions for students completing these programs. Education and work experience required will vary by employer. The salary and benefits for specific occupations will be dependent on work experience, education, background, and employer.

## Gainful Employment Disclosures: Programming

Gainful Employment Disclosures – 2022

Program Name PROGRAMMING

This program is designed to be completed in 8 months.

This program will cost \$828 if completed within normal time. There may be additional costs for living expenses. These costs were accurate at the time of posting, but may have changed.

Of the students who completed this program within normal time, the typical graduate leaves with \$0 of debt.

The following States do not have licensure requirements for this profession: California

For more information about graduation rates, loan repayment rates, and post-enrollment earnings about this institution and other postsecondary institutions please click here: <https://collegescorecard.ed.gov/>

NOTE:

Cost per unit \$46

Parking Permits cost \$68 a year or \$34 a semester

RTA Go Pass cost \$16 a year or \$8 a semester

SGA discount sticker (optional) - \$14 a year or \$7 a semester

Student representation fee (optional) - \$4 a year or \$2 a semester