

COMPUTER INFORMATION SYSTEMS, A.S.

An Associate degree in CIS may be earned by completing a CIS State Certificate in Internet Authoring, Programming, or Networking (18 units) as well as all MSJC General Education Option A requirements (a total of 60 units).

AS.CIS.NETWORK, AS.CIS.INTERNET, AS.CIS.PROGRAM

Program Map Design Your Future!

Begin by exploring MSJC program maps to find a career or transfer (<https://msjc.emsicc.com/?radius=®ion=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.

MSJC General Education Option A

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.

Authoring Focus

Fall Semester 1		Units
ENGL-101	College Composition (formerly Freshman Composition)	4
MATH-105	College Algebra	4
CSIS-101 or CSIS-111B	Introduction to Computers and Data Processing or Fundamentals of Computer Programming	3
CSIS-103	Introduction to the Internet	3
CSCR-100	College Success and Career Readiness (formerly GUID-100 College Success)	3
Units		17
Spring Semester 1		Units
CSIS-115A	Web Development - Level 1	3
PS-101	Introduction to American Government and Politics	3
GEOG-108	World Regional Geography	3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A) ¹	3
CSIS-111B	Fundamentals of Computer Programming	3
Units		15
Fall Semester 2		Units
CSIS-113B or CSIS-116E	Java Programming - Level 1 or Python Programming - Level 1	3
CSIS-786	Developing ASP.NET Web Applications (formerly CSIS-086) ¹	3

BIOL-100 or BIOL-115	Human Biology or Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology)	4
ART-100	Art Appreciation	3
ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3
Units		16
Spring Semester 2		Units
CSIS-114A	SQL Programming - Level 1	3
CSIS-124A	SQL Programming - Level 2 ¹	3
CSIS-201	System Analysis and Design	3
CSIS-202	CCNA 1 Computer Networks (formerly Networks and Data Communications)	3
COMM-103	Interpersonal Communication	3
Units		15
Total Units		63

¹ Take second 8 weeks: CSIS-525 Web Development - Level 2 (formerly CSIS-125A), CSIS-786 Developing ASP.NET Web Applications (formerly CSIS-086), CSIS-123B Java Programming - Level 2 (formerly JAVA Programming - Level 2), CSIS-124A SQL Programming - Level 2

Networking Focus

Fall Semester 1		Units
ENGL-101	College Composition (formerly Freshman Composition)	4
MATH-105	College Algebra	4
CSIS-101	Introduction to Computers and Data Processing	3
CSCR-100	College Success and Career Readiness (formerly GUID-100 College Success)	3
Units		14
Spring Semester 1		Units
CSIS-202	CCNA 1 Computer Networks (formerly Networks and Data Communications)	3
PS-101	Introduction to American Government and Politics	3
GEOG-108	World Regional Geography	3
CSIS-201	System Analysis and Design	3
ART-100	Art Appreciation	3
Units		15
Fall Semester 2		Units
CSIS-791	CCNA 2 Routing and Switching Essentials (formerly CSIS-091)	3
CSIS-592	CCNA 3 Scaling Networks (formerly CSIS-092) ¹	3
BIOL-100 or BIOL-115	Human Biology or Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology)	4
CSIS-160	Information Security Systems	3
COMM-103	Interpersonal Communication	3
Units		16

Spring Semester 2

CSIS-593	CCNA 4 Connecting Networks (formerly CSIS-093)	3
CSIS-115A	Web Development - Level 1	3
CSIS-114A	SQL Programming - Level 1	3
ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3
CSIS-164	Cybersecurity: Ethical Hacking	3
Units		15
Total Units		60

¹ Take second 8 weeks: CSIS-592 CCNA 3 Scaling Networks (formerly CSIS-092), CSIS-525 Web Development - Level 2 (formerly CSIS-125A), CSIS-124A SQL Programming - Level 2

Programming - General Focus

Fall Semester 1		Units
ENGL-101	College Composition (formerly Freshman Composition)	4
MATH-105	College Algebra	4
CSIS-101 or CSIS-111B	Introduction to Computers and Data Processing or Fundamentals of Computer Programming	3
CSCR-100	College Success and Career Readiness (formerly GUID-100 College Success)	3
Units		14

Spring Semester 1		
CSIS-113A	C++ Programming - Level 1	3
PS-101	Introduction to American Government and Politics	3
GEOG-108	World Regional Geography	3
CSIS-201	System Analysis and Design	3
ART-100	Art Appreciation	3
Units		15

Fall Semester 2		
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-123A	C++ Programming - Level 2 ¹	3
BIOL-100 or BIOL-115	Human Biology or Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology)	4
CSIS-160	Information Security Systems	3
COMM-103	Interpersonal Communication	3
Units		16

Spring Semester 2		
Select one of the following CSIS level 1 Electives:		3
CSIS-115A	Web Development - Level 1	
CSIS-114A	SQL Programming - Level 1	
Select one of the following CSIS level 2 Electives: ¹		3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	
CSIS-211	Introduction to Data Structures and Algorithms	

CSIS-124A	SQL Programming - Level 2	
CSIS-113C	C# Programming - Level 1 (formerly C# Programming)	3
CSIS-123C	C# Programming - Level 2 ¹	3
ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3
Units		15
Total Units		60

¹ Take second 8 weeks: CSIS-525 Web Development - Level 2 (formerly CSIS-125A), CSIS-211 Introduction to Data Structures and Algorithms, CSIS-124A SQL Programming - Level 2, CSIS-123A C++ Programming - Level 2

Programming - Database Focus

Fall Semester 1		Units
ENGL-101	College Composition (formerly Freshman Composition)	4
MATH-105	College Algebra	4
CSIS-101 or CSIS-111B	Introduction to Computers and Data Processing or Fundamentals of Computer Programming	3
CSCR-100	College Success and Career Readiness (formerly GUID-100 College Success)	3
Units		14

Spring Semester 1		
CSIS-116E	Python Programming - Level 1	3
PS-101	Introduction to American Government and Politics	3
GEOG-108	World Regional Geography	3
CSIS-201	System Analysis and Design	3
ART-100	Art Appreciation	3
Units		15

Fall Semester 2		
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-126E	Python Programming - Level 2 ¹	3
BIOL-100 or BIOL-115	Human Biology or Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology)	4
CSIS-160	Information Security Systems	3
COMM-103	Interpersonal Communication	3
Units		16

Spring Semester 2		
Select one of the following CSIS level 1 Electives:		3
CSIS-115A	Web Development - Level 1	
CSIS-114A	SQL Programming - Level 1	
Select one of the following CSIS level 2 Electives: ¹		3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	
CSIS-124A	SQL Programming - Level 2	
CSIS-113B	Java Programming - Level 1	3

CSIS-211	Introduction to Data Structures and Algorithms ¹	3
ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3
Units		15
Total Units		60

¹ Take second 8 weeks: CSIS-525 Web Development - Level 2 (formerly CSIS-125A), CSIS-124A SQL Programming - Level 2, CSIS-123B Java Programming - Level 2 (formerly JAVA Programming - Level 2), CSIS-211 Introduction to Data Structures and Algorithms.

Programming - Web Focus

Fall Semester 1		Units
ENGL-101	College Composition (formerly Freshman Composition)	4
MATH-105	College Algebra	4
CSIS-101 or CSIS-111B	Introduction to Computers and Data Processing or Fundamentals of Computer Programming	3
CSCR-100	College Success and Career Readiness (formerly GUID-100 College Success)	3
Units		14

Spring Semester 1		Units
CSIS-118B	Computer Organization & Assembly Language	3
PS-101	Introduction to American Government and Politics	3
GEOG-108	World Regional Geography	3
CSIS-201	System Analysis and Design	3
ART-100	Art Appreciation	3
Units		15

Fall Semester 2		Units
CSIS-113B	Java Programming - Level 1	3
CSIS-123B	Java Programming - Level 2 (formerly JAVA Programming - Level 2) ¹	3
BIOL-100 or BIOL-115	Human Biology or Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology)	4
CSIS-160	Information Security Systems	3
COMM-103	Interpersonal Communication	3
Units		16

Spring Semester 2		Units
Select one of the following CSIS level 1 Electives:		3
CSIS-115A	Web Development - Level 1	
CSIS-114A	SQL Programming - Level 1	
Select one of the following CSIS level 2 Electives: ¹		3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	
CSIS-124A	SQL Programming - Level 2	
CSIS-211	Introduction to Data Structures and Algorithms ¹	3
CSIS-213	Discrete Structures	3

ECON-201 or PSYC-101	Principles of Macroeconomics or Introduction to Psychology	3
Units		15
Total Units		60

¹ Take second 8 weeks: CSIS-525 Web Development - Level 2 (formerly CSIS-125A), CSIS-124A SQL Programming - Level 2, CSIS-123B Java Programming - Level 2 (formerly JAVA Programming - Level 2)

Requirements

An Associate Degree in this program requires students to follow MSJC's General Education, Option A and complete all general education areas, all major requirements, and complete an overall total of 60 degree applicable units with a minimum 2.0 GPA.

Course	Title	Credits
MSJC General Education Option A (https://catalog.msjc.edu/degrees-certificates-curricula/general-education-option-a/)		24
Select one of the following CIS State Certificates:		18
Internet Authoring		
Networking		
Programming		
Electives (as needed to reach 60 units)		

Internet Authoring

Course	Title	Credits
Required Courses		
CSIS-103 or CSIS-111B	Introduction to the Internet Fundamentals of Computer Programming	3
CSIS-114A	SQL Programming - Level 1	3
CSIS-115A	Web Development - Level 1	3
CSIS-525	Web Development - Level 2 (formerly CSIS-125A)	3
CSIS-786	Developing ASP.NET Web Applications (formerly CSIS-086)	3
Select one of the following:		3
CSIS-113B	Java Programming - Level 1	
CSIS-113C	C# Programming - Level 1 (formerly C# Programming)	
CSIS-116E	Python Programming - Level 1	
Total Units		18

Networking

Course	Title	Credits
Required Courses		
CSIS-101	Introduction to Computers and Data Processing	3
CSIS-201	System Analysis and Design	3
CSIS-202	CCNA 1 Computer Networks (formerly Networks and Data Communications)	3
CSIS-592	CCNA 3 Scaling Networks (formerly CSIS-092)	3
CSIS-593	CCNA 4 Connecting Networks (formerly CSIS-093)	3

CSIS-791	CCNA 2 Routing and Switching Essentials (formerly CSIS-091)	3
Total Units		18

Programming

Course	Title	Credits
Required Courses		
CSIS-118B	Computer Organization & Assembly Language	3
CSIS-201	System Analysis and Design	3
Subtotal		6
Programming Elective Courses		
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
Additional Elective Courses		
Select six units from 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
Total Units		18

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.