

# GEOGRAPHIC INFORMATION SCIENCE CERTIFICATE

The GIS Certificate prepares students to be skilled users of GIS, able to apply their skills to careers in the area of study. The Geographic Information Science Certificate will be awarded for the completion of 12 units of required courses and 6 units of elective courses.

CT.GEOG.GIS

## Program Map Design Your Future!

Begin by exploring MSJC program maps to find career or transfer (<https://msjc.emsicc.com/?radius=&region=All%20Regions>) opportunities. Program maps show the recommended course sequence that leads 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

| Fall Semester 1 |  | Units    |
|-----------------|--|----------|
| GEOG-105        | Map Interpretation and Spatial Analysis        | 3        |
| GEOG-115        | Introduction to Geographic Information Science | 2        |
| <b>Units</b>    |  | <b>5</b> |

| Spring Semester 1 |   | Units    |
|-------------------|---|----------|
| GIS-520           | Intermediate Geographic Information Science (formerly GEOG-520) | 4        |
| GIS-582           | Programming for GIS-Python Applications (formerly GEOG-582)     | 3        |
| <b>Units</b>      |   | <b>7</b> |

| Fall Semester 2    |   | Units     |
|--------------------|---|-----------|
| GIS-586            | GIS for Web Applications (formerly GEOG-586)                | 3         |
| GIS-525            | Advanced Geographic Information Science (formerly GEOG-525) | 3         |
| <b>Units</b>       |   | <b>6</b>  |
| <b>Total Units</b> |   | <b>18</b> |

### Fire & Safety

| Fall Semester 1 |  | Units    |
|-----------------|--|----------|
| GEOG-105        | Map Interpretation and Spatial Analysis        | 3        |
| GEOG-115        | Introduction to Geographic Information Science | 2        |
| <b>Units</b>    |  | <b>5</b> |

| Spring Semester 1 |   | Units    |
|-------------------|---|----------|
| GIS-520           | Intermediate Geographic Information Science (formerly GEOG-520) | 4        |
| GIS-582           | Programming for GIS-Python Applications (formerly GEOG-582)     | 3        |
| <b>Units</b>      |   | <b>7</b> |

| Fall Semester 2    |   | Units     |
|--------------------|---|-----------|
| GIS-585            | GIS for Catastrophes (formerly GEOG-585)                    | 3         |
| GIS-525            | Advanced Geographic Information Science (formerly GEOG-525) | 3         |
| <b>Units</b>       |   | <b>6</b>  |
| <b>Total Units</b> |   | <b>18</b> |

### Water Industry

| Fall Semester 1 |  | Units    |
|-----------------|--|----------|
| GEOG-105        | Map Interpretation and Spatial Analysis        | 3        |
| GEOG-115        | Introduction to Geographic Information Science | 2        |
| <b>Units</b>    |  | <b>5</b> |

| Spring Semester 1 |   | Units    |
|-------------------|---|----------|
| GIS-520           | Intermediate Geographic Information Science (formerly GEOG-520) | 4        |
| GIS-582           | Programming for GIS-Python Applications (formerly GEOG-582)     | 3        |
| <b>Units</b>      |   | <b>7</b> |

| Fall Semester 2    |   | Units     |
|--------------------|---|-----------|
| GIS-584            | Water Management with GIS (formerly GEOG-584)               | 3         |
| GIS-525            | Advanced Geographic Information Science (formerly GEOG-525) | 3         |
| <b>Units</b>       |   | <b>6</b>  |
| <b>Total Units</b> |   | <b>18</b> |

## Requirements

| Course                  | Title   | Credits |
|-------------------------|---|---------|
| <b>Required Courses</b> |   |         |
| GEOG-105                | Map Interpretation and Spatial Analysis                         | 3       |
| GEOG-115                | Introduction to Geographic Information Science                  | 2       |
| GIS-520                 | Intermediate Geographic Information Science (formerly GEOG-520) | 4       |
| GIS-525                 | Advanced Geographic Information Science (formerly GEOG-525)     | 3       |

| Elective Courses   |  | Units |
|--|--|-------|
| Elective courses are identified under the Geographic Information Science concentration area. Students must complete 6 units (any combination) of elective courses under this concentration area to earn a Certificate in Geographic Information Science. |  | 6     |

|          |  |  |
|----------|--|--|
| GEOG-549 | Work Experience Education: Geographic Information Science      |  |
| GIS-580  | Geospatial Information Systems Practicum I (formerly GEOG-080) |  |
| GIS-582  | Programming for GIS-Python Applications (formerly GEOG-582)    |  |

|                    |  |           |
|--------------------|--|-----------|
| GIS-583            | Spatial Database Design and Management (formerly GEOG-583) |           |
| GIS-584            | Water Management with GIS (formerly GEOG-584)              |           |
| GIS-585            | GIS for Catastrophes (formerly GEOG-585)                   |           |
| GIS-586            | GIS for Web Applications (formerly GEOG-586)               |           |
| <b>Total Units</b> |  | <b>18</b> |

## 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: Geographic Information Science

Gainful Employment Disclosures – 2024

**Program Name** GEOGRAPHIC INFORMATION SCIENCE

**This program is designed to be completed in 8 months.**

**This program will cost \$920 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

Nonresident Fees- Tuition: \$318

Capital Outlay: \$58

Parking Permits cost \$90 a year or \$45 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

Student Health Center Fee - \$52 a year or \$26 a semester

\*For summer session fees and non-CA resident tuition, please

see: <https://www.msjc.edu/enroll/what-fees-do-i-have-to-pay.html>