

***Geographic Information Science Certificate***  
***Focus: Water Industry***

From local to global scales, geographers study political organization, transportation systems, marketing, economics, climate and weather, urban planning, land use development, globalization, and more. They examine the distribution of landforms, study soils, and vegetation, analyze limited resources such as water, and human impacts on the surface of the planet. In general, geographers work in government research, public agencies, and are environmental consultants for nonprofit organizations.

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

**Transfer Majors/Award Focus**

- Geography, A.A.-T CSU, UC
- Geographic Information Science, A.S.
- Geographic Information Science, Certificate, Focus: General, Fire & Safety, Water Industry

**GE Pattern/Units**

- GE Pattern: n/a
- Total Units: 18



**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**

**6 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	GEOG-105	Map Interpretation and Spatial Analysis	3
<input type="checkbox"/>	GEOG-115	Introduction to Geographic Information Science	3

**Semester 2**

**6 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	GEOG-520	Intermediate Geographic Information Science	3
<input type="checkbox"/>	GEOG-582	Programming for GIS	3

**Semester 3**

**6 Units**

✓	COURSE	TITLE	UNIT
<input type="checkbox"/>	GEOG-525	Advanced Geographic Information Science	3
<input type="checkbox"/>	GEOG-584	Water Management with GIS	3

**Career Options**

Geophysical Data Technicians (B, M)  
 Geographers (B, M, D)  
 Geographic Information Systems Technician (B, M)  
 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.