Field Data Mapping and Geographic Information Systems (GIS) Certificate

Students interested in research related to field data collection and analysis will need certain skills to correctly find locations in field, identify locations, map sites, and integrate collected data into a Geographic Information System (GIS) for display and analysis. This interdisciplinary certificate program provides students with the tools needed to collect, map, display, and analyze data collected in a field-based setting and coordinate this with other mapping data and sources.

Total Units: 12

First Year

Semester 1
6 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
GEOG 331 Exploring Maps and Geographic Technologies	3		F(P)
3 units from List A	3	See List A	See List A

Semester 2
6 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
GEOG 335 Introduction to Geographic Information Systems Applications	3	Advisory: CISC 302	S
3 units from List A	3	See List A	See List A

^You must have passed the prerequisite course(s) with a "C" or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

*(O) = online available (P) = partially online

List A

List A-a minimum of 6 units from the following:

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
ANTH 300 Ⓩ Biological Anthropology	3	Advisory: Eligible for ENGWR 300	F(O), S(O), Su
ANTH 310 Ⓩ Cultural Anthropology	3	Advisory: Eligible for ENGWR 300	F(O), S(O), Su(O)

Career Options/Outlook:

Geographic Information Systems Technicians assist scientists, technologists, or related professionals in building, maintaining, modifying, or using geographic information systems (GIS) databases. May also perform some custom application development or provide user support. **Career opportunities require more than an associate degree.**

A sample of reported job titles:

Cartographer, Geographic Information Systems Analyst (GIS Analyst), Geographic Information Systems Coordinator (GIS Coordinator), Geographic Information Systems Specialist (GIS Specialist), Geographic Information Systems Technician (GIS Technician), Technical Support Specialist

Projected job openings in California (2020-2030):

10,550

Projected growth in California (2020-2030):

19% growth

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
BIOL 350 Environmental Biology	3	Advisory: ENGRD 312 & ENGWR 101	Check Class Schedule for offering
BIOL 352 Conservation Biology	3		Check Class Schedule for offering
GEOG 300 Ⓩ Physical Geography: Exploring Earth's Environmental Systems	3	Advisory: co-req: GEOG 301	F, S
GEOG 302 Ⓩ Environmental Studies & Sustainability	3		F, S
GEOG 310 Ⓩ Human Geography: Exploring Earth's Cultural Landscapes	3		F(O), S(O)
GEOL 300 Ⓩ Physical Geology	3	Advisory: co-req GEOL 301	F, S

Ⓩ At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the ZTC page of the college website.

Median Salary in California with advanced degree (2021):

$101,170/yr

Source:

https://www.onetonline.org/link/summary/15-1199.05

About this program map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan customized to meet your needs. This map is not a guarantee of course availability or financial aid applicability.

Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the Zero Textbook Costs page of the college website.