

# GEOGRAPHIC INFORMATION SYSTEMS

*Program Purpose: Students who complete Geographic Information Systems courses will be able to utilize GIS mapping and data management software to store, retrieve, manipulate, analyze and display spatial data.*

Geographic Information Systems (GIS) record, store, analyze and display information about the features that make up the earth's surface using computer-based software applications. This technology has applications in many career fields including law enforcement, land management, business, and the social and natural sciences. To explore specific career options, check the software and online resources available in the Career Transfer Center located in Fountain Hall, (805) 378-1536.

## Transfer Information

Students planning to transfer need to consult with a counselor, prepare a Student Education Plan, and take advantage of support services available in the Career Transfer Center located in Fountain Hall, (805) 378-1536. Transfer students interested in specializing in Geographic Information Systems who wish to qualify for an Associate in Arts Degree could explore Geography as a possible major.

### GIS M01 Introduction to Mapping and GIS 3 Units

*In-Class Hours:* 52.5 lecture

*C-ID:* GEOG 155

Introduces basic cartographic principles including map types, scales, projections, coordinate systems, as well as an introduction to Geographic Information Systems (GIS) technology and software. Provides hands-on experience through the application of GIS technology to solve spatial problems and display geographic data.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** None

**IGETC:** None

### GIS M02 GPS and Map Analysis 3 Units

*In-Class Hours:* 52.5 lecture

*Advisories/Rec Prep:* GEOG M01 and GEOG M01L

*C-ID:* GEOG 150

Introduces the use of a hand-held Global Positioning System (GPS) unit in the field, the terminology, hardware, and technology. Integrates the use of the hand-held GPS unit to determine location and collect and analyze data. Includes such topics as map interpretation, spatial statistics, and cartography.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** None

**IGETC:** None

### GIS M22 Raster GIS & Spatial Analysis 3 Units

*In-Class Hours:* 52.5 lecture

*Prerequisites:* GIS M01

Uses the ArcGIS software along with the Spatial Analyst and 3D extensions to explore the use of raster GIS data in analysis and visualization. Includes terrain analysis, hydrologic analysis, suitability analysis, and 3D modeling.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU

**UC Credit Limitations:** None

**CSU GE-Breadth:** None

**IGETC:** None

### GIS M23 Remote Sensing 3 Units

*In-Class Hours:* 52.5 lecture

*Prerequisites:* GIS M01

Uses ArcGIS software to analyze data collected by remote means such as satellite imagery, aerial photography and drone-acquired data. Introduces the basic concepts of remote sensing, characteristics of remote sensors, and remote sensing applications in academic disciplines and professional industries.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU

**UC Credit Limitations:** None

**CSU GE-Breadth:** None

**IGETC:** None

### GIS M24 Intermediate GIS Applications 3 Units

*In-Class Hours:* 52.5 lecture

*Prerequisites:* GIS M01

Uses the ArcGIS ArcView software to explore intermediate topics in GIS applications. Includes geodatabase creation and editing, geoprocessing models, geocoding, and working with annotation.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** None

**IGETC:** None

## Dean

Robert Cabral, Phone (805) 378-1572

## Counselors

Daniel Aguilar, Chuck Brinkman, Trevor Hess, Samantha Zaldivar