

# Geography

## Overview

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Geography is a spatial science that studies the Earth's physical features and its human elements. Geographers study the relationships among geographic places, natural systems, society, cultural activities, and the interdependence of all these over space.

There are two main branches of geography: human geography and physical geography. Human geography is concerned with the spatial aspects of human existence, which is how people and their activities are distributed in space, how people use and perceive space, and how people create and sustain the places that make up Earth's surface. Physical geographers study the physical elements and spatial processes that make up and shape the environment, including energy, air, water, weather, climate, landforms, soils, animals, and plants.

Geographers also study the linkages between human activity and natural systems. Geographers were, in fact, among the first scientists to sound the alarm that human-induced changes to the environment were beginning to threaten the balance of life itself. Geographers today are active in the study of global warming, desertification, deforestation, loss of biodiversity, groundwater pollution, flooding, and sustainability.

The Folsom Lake College geography program offers courses that satisfy lower division general education requirements in both the physical and social sciences. Students planning to transfer to a four-year institution with a major in geography should consult the lower division requirements at the university they plan to attend.



## Career Options

- Cartographer
- Climatologist
- Demographer
- Educator (elementary through university)
- Environmental Consultant
- Geoscientist
- GIS Analyst
- International Business
- International Development
- Land Surveyor
- Marketing Analyst
- Natural Resource Management
- Park Ranger

- Real Estate Analyst
- Remote Sensing Specialist
- Research Scientist
- Tourism
- Transportation Specialist
- Urban and Regional Planning

Some career options may require more than two years of college study.

## Highlights

- Comprehensive course offerings, including a physical laboratory.
- Field study courses to Yosemite, Point Reyes, Monterey/Big Sur, and the Lake Tahoe area.

## Program Maps

[Liberal Arts and Social Sciences Undecided Major \(/flc/main/doc/instruction/program-maps/LASS-Undecided-major.pdf\)](/flc/main/doc/instruction/program-maps/LASS-Undecided-major.pdf)

[Science, Technology, Engineering, and Mathematics Undecided Major \(/flc/main/doc/instruction/program-maps/STEM-Undecided-major.pdf\)](/flc/main/doc/instruction/program-maps/STEM-Undecided-major.pdf)

[Geography, A.A.-T Degree \(/flc/main/doc/instruction/program-maps/Geography-AAT.pdf\)](/flc/main/doc/instruction/program-maps/Geography-AAT.pdf)

[Interdisciplinary Studies: Social and Behavioral Sciences, A.A. Degree \(/flc/main/doc/instruction/program-maps/IS-Social-and-Behaviorial-Science-AA.pdf\)](/flc/main/doc/instruction/program-maps/IS-Social-and-Behaviorial-Science-AA.pdf)

[Geography, Geographic Information Systems, Certificate of Achievement \(/flc/main/doc/instruction/program-maps/Geographical-Information-Systems-Certificate.pdf\)](/flc/main/doc/instruction/program-maps/Geographical-Information-Systems-Certificate.pdf)

Dean [Greg McCormac \(/about-us/contact-us/faculty-and-staff-directory/greg-mccormac\)](/about-us/contact-us/faculty-and-staff-directory/greg-mccormac)  
 Department Chair [Jason Pittman \(/about-us/contact-us/faculty-and-staff-directory/jason-pittman\)](/about-us/contact-us/faculty-and-staff-directory/jason-pittman)  
 Meta-Majors [Science, Technology, Engineering, and Mathematics \(/academics/meta-majors/science-technology-engineering-and-mathematics\)](/academics/meta-majors/science-technology-engineering-and-mathematics)  
[Liberal Arts and Social Sciences \(/academics/meta-majors/liberal-arts-and-social-sciences\)](/academics/meta-majors/liberal-arts-and-social-sciences)

Phone (916) 608-6615

Email [mccormg@flc.losrios.edu \(mailto:mccormg@flc.losrios.edu\)](mailto:mccormg@flc.losrios.edu)

## Associate Degrees for Transfer

### A.A.-T. in Geography

Geography is a comprehensive discipline that seeks to understand the landscapes, features, occupants, and processes of the Earth. Geographers study the complex relationships among geographic places, natural systems, society, cultural activities, and the interdependence of all these over space and time. Geography is often seen as a bridge between human and physical sciences.

There are two main branches of geography: human geography and physical geography. Human geography is concerned with the spatial aspects of human existence – how people and their activities are distributed in space, how people use and perceive space, and how people create and sustain the places that make up Earth’s surface. Physical geographers study the physical elements and spatial processes that make up and shape the environment, including energy, air, water, weather, climate, landforms, soils, animals, and plants. Many human and physical geographers also employ skills in cartography and Geographic Information Systems (GIS).

Geographers also study the linkages between human activity and natural systems. Geographers were, in fact, among the first scientists to sound the alarm that human-induced changes to the environment were beginning to threaten the balance of life itself. Geographers today are active in the study of global warming, desertification, deforestation, loss of biodiversity, groundwater pollution, flooding, and more.

The A.A. transfer degree in geography provides students with a solid foundation in geography as well as the standard prerequisites for upper division coursework leading to the baccalaureate degree. The required and elective coursework surveys a broad spectrum of physical geography, human geography, GIS, and related disciplines.

For students planning to transfer to a four-year school with a major in geography, it is critical that you meet with an FLC counselor to select and plan the courses for your major. Schools can vary widely in terms of the required lower division preparation.

Catalog Date: January 1, 2021

### Degree Requirements

COURSE CODE	COURSE TITLE	UNITS
GEOG 300	Physical Geography: Exploring Earth's Environmental Systems	3
GEOG 301	Physical Geography Laboratory	1
GEOG 310	Human Geography: Exploring Earth's Cultural Landscapes	3
<b>A minimum of 6 units from the following:</b>		6
GEOG 306	Weather and Climate (3)	
GEOG 322	Geography of California (3)	
GEOG 330	Introduction to Geographic Information Systems (3)	

COURSE CODE	COURSE TITLE	UNITS
GEOG 331	Exploring Maps and Geographic Technologies (3)	
GEOG 390	Field Studies in Geography (1 - 4)	
<b>A minimum of 6 units from the following:</b>		6
ANTH 310	Cultural Anthropology (3)	
GEOG 300	Physical Geography (3)	
<b>Total Units:</b>		<b>19</b>

The Associate in Arts in Geography for Transfer (AA-T) degree may be obtained by completion of 60 transferable, semester units with a minimum 2.0 GPA, including (a) the major or area of emphasis described in the Required Program, and (b) either the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.

## Student Learning Outcomes

Upon completion of this program, the student will be able to:

- understand and describe the complexity of relationships between humans and their environment.
- demonstrate an awareness of the physical processes that shape the Earth.
- compare and contrast the general biophysical and sociocultural differences and similarities among world regions.
- recognize the utility of and demonstrate a proficiency with geospatial analysis techniques (GIS, cartography, spatial data collection and analysis, etc.) in solving contemporary geography problems.
- evaluate the role that collegiate geographic studies can play in preparing a student for contemporary career in the geosciences.

## Associate Degrees

### A.A. in Interdisciplinary Studies: Social and Behavioral Sciences

The Interdisciplinary Studies degree is designed for students who wish a broad knowledge of arts and sciences plus additional coursework in a prescribed "Area of Emphasis". This program is a good choice for students planning on transferring to the California State University or University of California. The student will be able to satisfy general education requirements, plus focus on transferable coursework that relates to a specific major and/or individual interest. This degree will have an "Area of Emphasis" in Social and Behavioral Sciences. These courses emphasize the perspectives, concepts, theories, and methodologies of the disciplines typically found in the vast variety of disciplines that comprise study in the Social and Behavioral Sciences. Students will study about themselves and others as members of a larger society. Topics and discussions to stimulate critical thinking about ways people have acted in response to their societies will allow students to evaluate how societies and social subgroups operate. (Possible majors at a four-year institution include, but are not limited to: history, sociology, social studies, psychology, and family consumer science.)

It is highly recommended that students consult a counselor to determine the classes within each area that will best prepare them for their intended transfer major.

Catalog Date: January 1, 2021

### Degree Requirements

COURSE CODE	COURSE TITLE	UNITS
<b>A minimum of 18 units from the following:</b>		18
Select courses from at least 3 different disciplines.		
ADMJ 300	Introduction to Administration of Justice (3)	
ADMJ 302	Community Relations: Multicultural Issues (3)	
ADMJ 320	Concepts of Criminal Law (3)	
ANTH 310	Cultural Anthropology (3)	
ANTH 319	Visual Anthropology: Introduction to Ethnographic Film (3)	
ANTH 320	Introduction to Archaeology and World Prehistory (3)	
ANTH 323	Introduction to Archaeology (3)	
ANTH 330	Magic, Witchcraft, and Religion (3)	
ANTH 341	Introduction to Linguistics (3)	
BUS 320	Concepts in Personal Finance (3)	
BUS 330	Managing Diversity in the Workplace (3)	
BUS 340	Business Law (3)	
BUS 345	Law and Society (3)	
COMM 325	Intercultural Communication (3)	
COMM 341	Organizational Communication (3)	
COMM 351	Mass Media and Society (3)	
COMM 363	Introduction to Communication Theory (3)	
ECON 302	Principles of Macroeconomics (3)	
ECON 304	Principles of Microeconomics (3)	
ECON 320	Concepts in Personal Finance (3)	
ECE 312	Child Development (3)	
ECE 314	The Child, the Family and the Community (3)	
ECE 330	Infant and Toddler Development (3)	
ECE 430	Culture and Diversity in Early Childhood Education (3)	
GEOG 310	Human Geography: Exploring Earth's Cultural Landscapes (3)	
GEOG 322	Geography of California (3)	

COURSE CODE	COURSE TITLE	UNITS
HIST 307	History of World Civilizations to 1500 (3)	
HIST 308	History of World Civilizations, 1500 to Present (3)	
HIST 310	History of the United States (3)	
HIST 311	History of the United States (3)	
HIST 314	Recent United States History (3)	
HIST 319	American Environmental History (3)	
HIST 331	Women in American History (3)	
HIST 344	Survey of California History: A Multicultural Perspective (3)	
HIST 368	History of France (3)	
JOUR 310	Mass Media and Society (3)	
NUTRI 310	Cultural Foods of the World (3)	
POLS 301	Introduction to Government: United States (3)	
POLS 302	Comparative Politics (3)	
POLS 310	Introduction to International Relations (3)	
POLS 320	Introduction to Political Theory (3)	
PSYC 300	General Principles (3)	
PSYC 312	Biological Psychology (4)	
PSYC 320	Social Psychology (3)	
PSYC 335	Research Methods in Psychology (3)	
PSYC 340	Abnormal Behavior (3)	
PSYC 356	Human Sexuality (3)	
PSYC 368	Cross Cultural Psychology (3)	
PSYC 370	Human Development: A Life Span (3)	
PSYC 372	Child Development (3)	
SOC 300	Introductory Sociology (3)	
SOC 301	Social Problems (3)	
SOC 310	Marriage and the Family (3)	
SOC 321	Race, Ethnicity and Inequality in the United States (3)	
SOC 341	Sex and Gender in the U.S. (3)	
SOC 379	Making Social Change (3)	
SWHS 331	Cross Cultural Psychology (3)	
<b>Total Units:</b>		<b>18</b>

*The Interdisciplinary Studies: Social and Behavioral Sciences Associate in Arts (A.A.) degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See FLC graduation requirements.*

## Student Learning Outcomes

Upon completion of this program, the student will be able to:

- evaluate how societies and social subgroups operate (Social and Behavioral Sciences).

## Certificate of Achievement

### Geographic Information Systems Certificate

A Geographic Information System (GIS) is an assemblage of computers, software, and workforce personnel collecting, managing, analyzing and displaying spatial data. GIS is used to make informed decisions regarding an array of disciplines including Marketing, Forestry, Hazard Analysis, Landuse Planning, Business, Watershed Management, and Anthropology. This interdisciplinary certificate provides the theoretical and technical skills necessary to begin using GIS in a wide variety of applications. Skills obtained include GIS software application, GPS use, spatial data analysis, data management, programming and cartography.

**Catalog Date:** January 1, 2021

### Certificate Requirements

COURSE CODE	COURSE TITLE	UNITS
GEOG 331	Exploring Maps and Geographic Technologies (3)	3
GEOG 334	Introduction to GIS Software Applications	3
<b>A minimum of 1 unit from the following:</b>		<b>1</b>
GEOG 300	Physical Geography: Exploring Earth's Environmental Systems (3)	
GEOG 301	Physical Geography Laboratory (1)	
GEOG 390	Field Studies in Geography (1 - 4)	
GEOG 391	Field Studies in Geography: Mountain Landscapes (1 - 4)	
GEOG 392	Field Studies in Geography: Coastal Landscapes (1 - 4)	
GEOG 393	Field Studies in Geography: Arid Landscapes (1 - 4)	
GEOG 394	Field Studies in Geography: Volcanic Landscapes (1 - 4)	

COURSE CODE	COURSE TITLE	UNITS
GEOG 498	Work Experience in Geography (1 - 4)	
CISC 300	Computer Familiarization (1)	
CISC 310	Introduction to Computer Information Science (3)	
CISP 360	Introduction to Structured Programming (4)	
CISP 370	Beginning Visual Basic (4)	
CISP 400	Object Oriented Programming with C++ (4)	
CISP 401	Object Oriented Programming with Java (4)	
CISP 407	Programming in Python (4)	
CISP 430	Data Structures (4)	
<b>Total Units:</b>		<b>7</b>

## Student Learning Outcomes

Upon completion of this program, the student will be able to:

- demonstrate proficiency in the application of GIS software and related technologies.
- demonstrate proficiency in the collection, management, organization and manipulation of spatial data.
- adeptly employ the principles of cartography in a GIS environment.
- demonstrate proficiency in the application of spatial analysis skills.

## Geography (GEOG) Courses

### GEOG 300 Physical Geography: Exploring Earth's Environmental Systems

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	None.
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	AA/AS Area IV; CSU Area B1; IGETC Area 5A
<b>C-ID:</b>	C-ID GEOG 110
<b>Catalog Date:</b>	January 1, 2021

This course investigates the interrelationships between Earth and humans, with an emphasis on natural systems (solar energy balance, weather and climate, water resources, landforms, natural hazards, vegetation, and soil). Relevant application of these elements to today's world is stressed to help students better understand Earth's physical environment as well as human-environment interaction. A field trip may be required to relate class discussions to the real world. Students are encouraged to take the lab course (GEOG 301) concurrently. Consult a counselor to determine whether enrollment in the lab course is necessary.

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- assess how the receipt of solar energy and interaction of Earth's four major systems (the atmosphere, hydrosphere, lithosphere, and biosphere) creates our planet's diverse physical environment.
- use the scientific method and course experiences to formulate explanations for geographic variation in energy receipt, temperature, precipitation, weather and climate, vegetation, natural hazards, and landforms.
- evaluate aspects of human-environment interaction.
- discuss the role of humans in modifying Earth's physical environment as well as the environment's role in shaping human activities.
- apply geography problem solving skills to real world problems.

### GEOG 301 Physical Geography Laboratory

<b>Units:</b>	1
<b>Hours:</b>	54 hours LAB
<b>Prerequisite:</b>	None.
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	CSU Area B3; IGETC Area 5C
<b>C-ID:</b>	C-ID GEOG 111
<b>Catalog Date:</b>	January 1, 2021

This course provides "hands-on" study of the basic principles and concepts involved in understanding Earth's physical environment. Lab topics include observation, measurement and analysis of Earth's energy balance, weather and climate, vegetation, landforms, and natural hazards, as well as topographic map reading, interpretation, and navigation skills. Field trips and spatial data collection activities may be required.

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- effectively use and interpret geographic data.

- demonstrate an awareness of the utility of applied geography skills.
- apply basic geography skills such as mapping, map interpretation, data collection, data analysis, measuring and instrumentation.
- explain geographic processes which act upon and shape Earth's physical environment.

## GEOG 306 Weather and Climate

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	MATH 100
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	AA/AS Area IV; CSU Area B1; IGETC Area 5A
<b>C-ID:</b>	C-ID GEOG 130
<b>Catalog Date:</b>	January 1, 2021

This course is an introduction to atmospheric processes including energy and moisture exchanges, atmospheric pressure, winds, and global circulation. Severe weather conditions such as hurricanes and tornadoes are also studied. World, regional, and local climates are investigated. Student work will include weather observations and analysis of atmospheric data using charts, weather maps and radar and satellite imagery from the Internet and other sources. Because this course involves the use of some quantitative concepts, students are encouraged to have fundamental algebraic skills prior to enrolling in the course. Students may be required to attend a field trip and purchase a calculator for this course

### Student Learning Outcomes

Upon completion of this course, the student will be able to:

- analyze the dynamics of the energy balance of the Earth-atmosphere system.
- compare and contrast the forces that cause atmospheric motion as they relate to wind systems and the global circulation.
- analyze moisture and precipitation processes.
- analyze the dynamics of severe weather systems.
- analyze and map atmospheric data.
- classify and interpret atmospheric data in order to describe variation in climate over the Earth's surface.

## GEOG 310 Human Geography: Exploring Earth's Cultural Landscapes

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	None.
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	AA/AS Area V(b); AA/AS Area VI; CSU Area D; IGETC Area 4
<b>C-ID:</b>	C-ID GEOG 120
<b>Catalog Date:</b>	January 1, 2021

This course investigates the diverse patterns of human settlement, development, and movement on earth, which evolved as a result of cultural and environmental factors. Emphasis is placed on understanding global population and migration patterns, language, religion, ethnicity, political and economic systems, development issues, agriculture and urbanization.

### Student Learning Outcomes

Upon completion of this course, the student will be able to:

- analyze human's role in transforming Earth's surface into a series of distinctive cultural landscapes.
- propose explanations for the geographic origin and global diffusion of key aspects of culture (e.g. language, religion, ethnicity, development, agriculture, urbanization).
- demonstrate an understanding of cultural diversity in California, the U.S., and the world by becoming more aware of broad historical and modern global socioeconomic processes such as migration, colonization, and globalization.
- create maps from various types of socioeconomic data and demonstrate an understanding of key geographic concepts by analyzing and explaining the spatial pattern represented.

## GEOG 322 Geography of California

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	None.
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	AA/AS Area V(b); AA/AS Area VI; CSU Area D; IGETC Area 4
<b>C-ID:</b>	C-ID GEOG 140
<b>Catalog Date:</b>	January 1, 2021

This course is a study of the natural and cultural environments of California, with special emphasis on the interaction of people with landforms, climate, natural vegetation, soils and resources. Historical, political, and economic development within this diverse environment is presented. The diversity of cultures which make up the state's expanding population are studied and compared. Analysis of relevant issues of the day including those based on ethnic and cultural differences form an integral part of this course.

### Student Learning Outcomes

Upon completion of this course, the student will be able to:

- have students describe the physical and cultural environments existing within the state of California.
- critically assess the cultural and landscape interrelationships that have contributed to the historical, political, and economic development of the state.
- compare and contrast the contributions made by the various ethnic and cultural groups which comprise the state's population.
- evaluate patterns of social problems within the state, which are based on economic inequalities and ethnic and cultural differences.

## GEOG 330 Introduction to Geographic Information Systems

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	CISC 300
<b>Transferable:</b>	CSU; UC
<b>General Education:</b>	AA/AS Area II(b)
<b>C-ID:</b>	C-ID GEOG 155
<b>Catalog Date:</b>	January 1, 2021

A Geographic Information System (GIS) is a computer-based data processing tool used to manage and analyze spatial information. Applications of GIS include environmental assessment, analysis of natural hazards, management of municipal networks, business and industry site analysis, resource management and land-use planning. This course introduces the concepts, techniques, and tools of GIS including spatial data capture, management and analysis, as well as cartographic output through hands-on experience using GIS software. Students may be required to purchase GIS software and a flash drive in order to complete this course.

### Student Learning Outcomes

Upon completion of this course, the student will be able to:

- describe the components of a GIS.
- demonstrate comprehension of GIS analysis.
- identify public and private sector business applications for GIS.
- demonstrate basic skills in GIS including data capture, data analysis, and mapping output.
- assess appropriate applications of GIS analysis.

## GEOG 331 Exploring Maps and Geographic Technologies

<b>Units:</b>	3
<b>Hours:</b>	50 hours LEC; 12 hours LAB
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	GEOG 300; CISC 300 or equivalent with a grade of "C" or better
<b>Transferable:</b>	CSU; UC
<b>C-ID:</b>	C-ID GEOG 150
<b>Catalog Date:</b>	January 1, 2021

This course introduces students to the exciting world of maps (both hard-copy and digital) and the geographic techniques and technologies that are utilized in the creation of modern cartographic documents. The examination of cartographic constructs, basic statistics, Global Positioning Systems (GPS), Internet mapping, remote sensing, and Geographic Information Systems (GIS) will shed light on this interesting and rapidly changing area of spatial inquiry. A portable USB storage device may be required for this class. Short field activities may be required.

### Student Learning Outcomes

Upon completion of this course, the student will be able to:

- determine basic geographic information (e.g. location, distance and direction) using various map scales, coordinate systems, and projections.
- create, analyze, critique, and interpret data using maps, aerial photographs, and satellite imagery.
- demonstrate basic proficiency in traditional and technology-based cartographic skills.
- collect, import and display geospatial data within a GIS.
- critically analyze mapping applications and technologies commonly used in today's society.

## GEOG 334 Introduction to GIS Software Applications

<b>Units:</b>	3
<b>Hours:</b>	50 hours LEC; 12 hours LAB
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	CISC 300, GEOG 330, or GEOG 331
<b>Transferable:</b>	CSU
<b>Catalog Date:</b>	January 1, 2021

Geographic Information Systems (GIS) are computer-based mapping programs that analyze spatial data. This course provides the foundation for using desktop GIS software. A conceptual overview along with hands-on experience will be used to explore basic GIS software functionality. Emphasis will be placed on display characteristics, attribute querying, database exploration and management, spatial analysis, data creation, and cartographic presentation. A portable USB storage device is required and should be provided by the student. Not open to students who have completed GEOG 332.2

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify and utilize the components of the software graphical user interface including the table of contents, basic tools, tables, charts, and data and layout views.
- compile and manage spatial data including spatial data statistical classification methods.
- perform attribute and spatial queries.
- correlate values in separate tables using "join" and "relate" functions.
- create spatial data and produce maps using GIS software.
- analyze spatial relationships between map features.

## GEOG 344 Spatial Analysis and Modeling in GIS

<b>Units:</b>	3
<b>Hours:</b>	54 hours LEC
<b>Prerequisite:</b>	GEOG 330 or 331 with a grade of "C" or better
<b>Transferable:</b>	CSU
<b>Catalog Date:</b>	January 1, 2021

This course provides a survey of the various concepts, approaches, and tools involved in the analysis and modeling of spatial data using Geographic Information Systems (GIS). Emphasis is on the investigation of spatial distributions and relationships, and the methods used to answer spatial questions and solve spatial problems. Specific topics include statistical and spatial analysis, geoprocessing, spatial modeling, and map algebra. Additional topics include distance and density surfaces, cluster analysis, surface interpolation and resampling, hydrologic analysis, 3D display/animation, and regression analysis.

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify various spatial analysis techniques.
- apply statistical measures to characterize geospatial data.
- analyze geospatial distributions and relationships.
- compare and contrast various approaches to spatial modeling.
- design and create spatial models.

## GEOG 390 Field Studies in Geography

<b>Units:</b>	1 - 4
<b>Hours:</b>	3 - 24 hours LEC; 18 - 144 hours LAB
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	GEOG 300
<b>Transferable:</b>	CSU
<b>C-ID:</b>	C-ID GEOG 160
<b>Catalog Date:</b>	January 1, 2021

This course covers the field study of geographic principles and processes of specific areas (mountains, deserts, seashore, etc.). Course content will vary by destination. Topics may include physical geography, human geography, and/or geographic techniques such as the application of tools and techniques used for geographic field research (e.g., map and compass use, the Global Positioning System (GPS), Geographic Information Systems (GIS), etc.). Field trip(s) are required. For specific details, see the course description listed in the schedule. Students will be responsible for providing their own lodging (or camping equipment) and meals. At a minimum it is recommended that students be prepared to spend a full day in the field. This may require a day-pack, water container(s), food, foul weather gear, field notebook, clipboard, whistle, and personal safety gear (warm clothing, medications, cell phone, GPS, sunscreen, sunglasses, hiking shoes, and a hat).

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- apply concepts and processes discussed in lecture to experiences in the field.
- compose field notes and collect and analyze field data.
- examine the surrounding physical and/or human environment and formulate explanations for the geographic patterns and processes observed.
- integrate geographic information from various disciplines (geology, biology, ecology, urban studies, anthropology, history, economics, cultural studies, and others) in order to explain landscape patterns and processes.

## GEOG 393 Field Studies in Geography: Arid Landscapes

<b>Units:</b>	1 - 4
<b>Hours:</b>	6 - 24 hours LEC; 36 - 144 hours LAB
<b>Prerequisite:</b>	None.
<b>Advisory:</b>	GEOG 300
<b>Transferable:</b>	CSU
<b>Catalog Date:</b>	January 1, 2021

This course involves the study of geographic principles and processes in arid environments. The course content will vary by destination but may include topics in physical geography (e.g., plant and animal communities, climate and weather, geology and geomorphology, natural hazards, environmental impacts, etc.), human geography (e.g., cultural landscapes, economic activities, transportation issues, land use patterns, etc.), and include introduction to tools and techniques used for geographic field research (e.g., map and compass use, the Global Positioning System (GPS), Geographic Information Systems (GIS), etc.). Field excursions are required.

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

- apply concepts and processes discussed in lecture to experiences in the field.
- compose field notes and collect and analyze field data
- describe and explain geographic phenomena related to the particular physical and/or human environments under study.
- integrate geographic information from various disciplines (geology, biology, ecology, urban studies, anthropology, history, economics, cultural studies, and others) in order to explain landscape patterns and processes.

## GEOG 495 Independent Studies in Geography

**Units:** 1 - 3  
**Hours:** 54 - 162 hours LAB  
**Prerequisite:** None.  
**Transferable:** CSU  
**Catalog Date:** January 1, 2021

## GEOG 499 Experimental Offering in Geography

**Units:** 0.5 - 4  
**Prerequisite:** None.  
**Transferable:** CSU  
**Catalog Date:** January 1, 2021

## Faculty

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### Jennifer McHenry

Adjunct Professor

**Office:** FLC Main  
**Email:** [MchenrJ@flc.losrios.edu \(mailto:MchenrJ@flc.losrios.edu\)](mailto:MchenrJ@flc.losrios.edu)  
**Phone:** (916) 286-3691 ext. 12361  
**Web:** [Jennifer McHenry's Profile Page \(/about-us/contact-us/faculty-and-staff-directory/jennifer-mchenry\)](#)

### Jason Pittman

Professor

**Office:** FLC Main, Cypress Hall, FL2-216  
**Email:** [pittmaj@flc.losrios.edu \(mailto:pittmaj@flc.losrios.edu\)](mailto:pittmaj@flc.losrios.edu)  
**Phone:** (916) 608-6668  
**Web:** [Jason Pittman's Profile Page \(/about-us/contact-us/faculty-and-staff-directory/jason-pittman\)](#)

### Natasha Vidic

Adjunct Professor

**Office:** FLC Main  
**Email:** [vidicn@flc.losrios.edu \(mailto:vidicn@flc.losrios.edu\)](mailto:vidicn@flc.losrios.edu)  
**Phone:** (916) 286-3691 ext. 12340  
**Web:** [Natasha Vidic's Profile Page \(/about-us/contact-us/faculty-and-staff-directory/natasha-vidic\)](#)

### Susan Welsh

Adjunct Faculty

**Office:** FLC Main  
**Email:** [welshs@flc.losrios.edu \(mailto:welshs@flc.losrios.edu\)](mailto:welshs@flc.losrios.edu)  
**Web:** [Susan Welsh's Profile Page \(/about-us/contact-us/faculty-and-staff-directory/susan-welsh\)](#)

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