

# Department of Geography and Environmental Studies

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Social and Behavioral Sciences Building, Room 327J  
(909) 537-5519 Department of Geography and Environmental  
Studies website (<https://www.csusb.edu/geography/>)

## Environmental Studies

To accomplish its principal objective of promoting an understanding of the interaction of human with their environment, this interdisciplinary degree program includes courses primarily from the natural sciences and social sciences.

Major requirements from the natural sciences develop fundamental principles about the composition and functioning of the earth's ecosystems, principles deemed essential to a sound working knowledge of the environment. Course offerings from the social sciences assess the impact of humans upon the environment and the possibility of creating different environments.

The program is designed for students who desire either to focus on a study of the environment as part of a broader liberal arts curriculum or to prepare for an environmentally related career or graduate school. Professional opportunities for graduates include a wide range of positions in public agencies responsible for developing and enforcing environmental controls, and in business, industry and nonprofit organizations which need qualified individuals to communicate environmental information and to assist in compliance with environmental regulations. Additional opportunities are available in conjunction with other programs of study, such as environmental law, environmental health, education and public administration.

## Geography

Geography is concerned with the spatial variations and interrelationships between the natural and cultural features of the earth. Geographers study the earth primarily as the home of humans. As an approach to knowledge, geography forms an interdisciplinary bridge between the physical and cultural worlds, examining both humans and their environment. As a synthesizing discipline, geography is an especially attractive major for liberal arts and science students. Its body of theory and methodologies provides an analytic technique applicable to a wide range of questions. For students planning to end their formal education with a bachelor's degree, it also provides both the regional and world perspective required of responsible citizens. For the same reasons, geography is especially valuable for those who plan to do graduate work. Geography offers job opportunities in teaching, business, government, armed forces, conservation and water resources, planning and market research, geographic information systems (GIS) and international organizations.

Students who can meet the qualifications are also encouraged to participate in the California State University's International Programs (<https://catalog.csusb.edu/csu-system/#internationalprogramstext>). Such participation will not only contribute immediately to the student's geographical knowledge and degree program, but may have longer-term educational and career benefits as well.

## Departmental Honors

Students majoring in Geography and Environmental Studies are eligible to receive honors in geography at graduation if they have:

1. Completed at least one-half of the course work required by the major at this university;
2. Earned a grade point average of at least 3.5 in the major, both at this university and overall;
3. Earned an overall undergraduate grade point average of 3.0 or better;
4. Completed GEOG 5970 (for Geography majors) or GEOG 5971 (for Environmental Studies majors) approved in advance by the department chair.

Students interested in receiving this recognition must initiate the process by making a formal application with the Geography Department Administrative Support Coordinator.

## Current Faculty

Jennifer Alford, Associate Professor of Geography and Environmental Studies

B.A. 2003, North Carolina State University  
M.A. 2005, Ph.D. 2014, University of North Carolina at Greensboro

Brett Goforth, Professor of Geography and Environmental Studies  
B.S. 2001, California State University, Polytechnic, San Luis Obispo  
Ph.D., 2009, University of California, Riverside

Kevin Grisham, Professor of Geography and Environmental Studies  
B.A. 1997, California State University, San Bernardino  
M.A. 2005, Ph.D. 2009, University of California, Riverside

Rajrani Kalra, Professor of Geography and Environmental Sciences  
B.A. 1993, 1998, M.A. 1995, 1999, University of Dehli  
M.A. 2003, University of Akron  
Ph.D. 2007, Kent State University

Michal Kohout, Professor of Geography and Environmental Studies  
B.A. 1993, University of Western Ontario  
M.A. 1996, Southwest Texas State University  
Ph.D. 2004, Clark University

Norman Meek, Professor of Geography and Environmental Studies  
B.A. 1982, University of Kansas  
M.A. 1984, Michigan State University  
Ph.D. 1990, University of California, Los Angeles

Bo Xu, Professor of Geography and Environmental Sciences, Chair  
B.S. 1998, Beijing Normal University  
M.S. 2001, East China Normal University  
M.S. 2007, Ph.D. 2008, University of Georgia

Yolonda Youngs, Professor of Geography  
B.A. 1993, Florida State University  
M.S. 2004, Montana State University  
Ph.D. 2009, Arizona State University

## Emeriti

Andrew Bodman

Jeffrey D. Hackel

Theodore R. McDowell

James Mulvihill

Richard Rowland

## Undergraduate Degrees

### Bachelor of Arts

Environmental Studies (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/environmental-studies-ba/>)

with concentrations in:

- Environmental Sustainability
- Environmental Systems

Geography (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/geography-ba/>)

with concentrations in:

- Urban Studies
- Global Studies & Regional Geography
- Geographic Information Sciences (GIS)

### Minors

Environmental Studies (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/environmental-studies-minor/>)

Geographic Information Science (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/geographic-information-science-minor/>)

Geography (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/geography-minor/>)

Global Studies (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/geography-global-studies-minor/>)

### Certificate

Geographic Information Systems (<https://catalog.csusb.edu/colleges-schools-departments/social-behavioral-sciences/geography-environmental-studies/geographic-information-systems-certificate/>)

### Courses

#### **GEOG 1010. Introduction to Human Geography. Units: 3**

Introduction to the global patterns and dynamics of such human activities as population growth and movements, politics, religion, language, urbanization, industrialization, and economic development. The course emphasizes the processes that produce regional and environmental differences. Satisfies GE D3/4, G designation, World Cultures and Diversity pathway.

#### **GEOG 1030. Physical Geography. Units: 3**

Semester Corequisite: GEOG 1030L

A survey of Earth's environmental systems and natural features, with emphasis on relationships between the atmosphere, landforms, ecosystems, and human activities. Three hours lecture. Satisfies the general education requirement for scientific inquiry in physical science Satisfies GE B1/5A.

#### **GEOG 1030L. Physical Geography Laboratory. Unit: 1**

Semester Corequisite: GEOG 1030

Physical geography laboratory course that provides environmental observations and scientific experiments to study the spatial patterns, processes, and relationships of Earth's atmosphere, hydrosphere, lithosphere, and biosphere. Three hours lab. Satisfies GE B3/5C. Materials fee required.

#### **GEOG 1070. Environmental Studies Orientation Seminar. Units: 2**

Semester Corequisite: Enrollment required first term that student has declared the Environmental Studies Major

Analysis and development of foundation academic skills and inquiry to support career pathway goals in environmental studies, including baseline assessment of student learning outcomes for the Environmental Studies B.A. degree program. Student advising includes the preparation of graduation plans. Enrollment is required the first term that this major is declared. Graded credit/no credit.

#### **GEOG 1650. World Regions and Peoples. Units: 3**

Survey of major regions of the world using general physical and cultural concepts to explain patterns and problems of human activities in relation to natural environments. Satisfies GE D3/4, DI, G designations, World Cultures and Diversity, Global Connections pathways.

#### **GEOG 2000. Environment and Society. Units: 3**

An interdisciplinary study of relationships between social and natural systems comprising modern environmental issues. This course is a core requirement of the Environmental Studies major and minor. Satisfies GE D3/4, G designation, Environmental Sustainability pathway.

#### **GEOG 2040. Water in the West. Units: 3**

Within the framework of Western North America, water use has been a historically contentious issue that still persists today. The course will provide an overview of the fundamentals of hydrology, and through quantitative reasoning and integrative learning examine the impact that the use of water resources have upon the physical and human environment. The historical, present, and future significance of these impacts will be examined through the lens of the global community, and social/economic justice. The effects of climate change and policy on water availability will be examined. Satisfies GE B1/5A, G designation.

#### **GEOG 2200. Introduction to Global Studies. Units: 3**

Quarter Prerequisite: SSCI 165 or consent of instructor

Examine the causes and consequences of globalization, including climate change, migration, cultural conflicts, and economics. Understand worldviews, varying cultural contexts and global institutions and their connection to globalization. Develop the skills necessary to be a global citizen and have global competency. Formerly known as GEOG 303.

### **GEOG 2201. Issues in the Global System. Units: 3**

Identifies and explores a wide range of issues (for example, refugees, terrorism, poverty/underdevelopment and climate change) that impact the global community and are connected to economic, cultural, political and environmental globalization. Emphasizes the varied techniques used to analyze information about globalization and its related issues.

### **GEOG 2249. Map Interpretation. Units: 3**

Introduction to maps as a communication tool, focusing on map fundamentals, such as scale, symbols and design, as well as using maps as a practical device for navigation and spatial measurement. Participation in a weekend outdoor map reading exercise is required. Formerly GEOG 201.

### **GEOG 2250. Introduction to Geographic Information Systems and Cartography. Units: 4**

An introduction to the fundamental principles and theories of geographic information systems (GIS) and cartography. Basic concepts of mapping, map projections, coordinate systems, geographic data models and data input, management, manipulation and analysis are covered. After completion of this course, Students will be able to use GIS software to make maps and solve simple spatial problems. Three hours lecture and two hours activity. Formerly offered as GEOG 202.

### **GEOG 3004. Field Methods in Geography. Units: 3**

Semester Prerequisite: GEOG 1030 and GEOG 2249. Quarter Prerequisite: GEOG 103 and 201  
Introduction to methods and techniques for the acquisition of geographic data from direct field measurement and observations. One hour lecture and six hours field activity. Materials fee required. Formerly offered as GEOG 304.

### **GEOG 3018. Geographic Statistics and Research Methods. Units: 3**

Introduction to research and presentation techniques. It will also include basic statistical concepts and qualitative techniques used in geography (including spatial analysis and the writing/presenting of geographic research projects).

### **GEOG 3020. Social Geography. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
The spatial relationships of social characteristics, processes, institutions, and social groups. How social processes and identities are intertwined with the places where we live. Formerly offered as GEOG 320.

### **GEOG 3030. Cultural Geography. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
Study of people and the places where they live by analyzing cultural processes, cultural landscapes, and cultural identities. Introduces culture from a geographical perspective, focusing on cultural processes in place and across space.

### **GEOG 3040. Urban Geography. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
Analysis of urban life, land use planning, urban processes such as cultural diversity, suburbanization, urban environment, and social trends. Formerly known as GEOG 440.

### **GEOG 3045. Global Cities. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor. Quarter Prerequisite: junior or senior standing  
Analysis of global cities and the processes of change within the urban environment from a spatial perspective. Cities as centers of technological innovation and business entrepreneurial success, and places of challenges such as urban environmental quality and quality of life due to social conflict and inequality. Urban information systems approach is used to understand urban problems and potential policy solutions. Satisfies G designation. Formerly known as SSCI 321.

### **GEOG 3050. Economic Geography. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
Processes driving spatial patterns of economic activity at the global, national, regional, and local scales. Topics include economic globalization, spatial distribution of resources, business, labor, economic institutions, and trade producing uneven geographies of economic development. Formerly known as GEOG 420.

### **GEOG 3060. Political Geography. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor. Quarter Prerequisite: GEOG 100  
Examination of the interactions between political processes, space, place, and environment at geographic scales ranging from international to local. Topics include nation-state formation, geopolitics, imperialism and colonialism, the environment, elections and representation and the role of the contemporary state. Formerly a topic under GEOG 390. Formerly known as GEOG 325.

### **GEOG 3065. Migration and Borderlands. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
Global migration processes and territorial sovereignty. Focus on areas of the world that are currently and historically important sending and destination regions for refugees and other types of migrations. Role of borders in migration is examined.

### **GEOG 3300. Weather and Climate. Units: 4**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or consent of instructor. Quarter Prerequisite: GEOG 103 or consent of instructor  
An examination of atmospheric processes and the relationships between the atmosphere, hydrosphere, lithosphere and biosphere that influence local, regional and global patterns of weather and climate. Relationships between human activity, vegetation patterns, weather and climate will be discussed. Materials fee required. Three hours lecture and three hours lab. Formerly GEOG 360.

### **GEOG 3500. Conservation and Natural Resources. Units: 3**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or consent of instructor; and GEOG 2000  
Principles of resource utilization and ecology as they involve human development and politico-economic policy. Formerly known as GEOG 350.

### **GEOG 3501. Environmental Sustainability. Units: 3**

This course explores how human activities can be altered to meet the needs of both current and future generations to ensure long-term sustainability of the Earth's environmental systems and resources. Topics include, but are not limited to, sustainable approaches to agricultural production, urban development, resource conservation, and stakeholder inclusion across varying geographical scales including the CSUSB campus and surrounding communities. Satisfies GE D4/UD-4.

### **GEOG 3520. Environmental Inquiry and Education. Units: 4**

Quarter Prerequisite: Must be junior class standing or higher  
This course is designed to prepare students for developing and implementing environmental education opportunities in formal and non-formal education settings. Topics include the history and philosophy of environmental education, environmental laws and regulations, environmental assessment using various technologies and methods, critical analysis of environmental issues and decision-making, curriculum integration and environmental education teaching methodologies. Students will learn how to disseminate complex scientific-based information into a format that is useful for diverse audiences in the K-12 and community settings. Materials fee required. Three hours lecture and 3 hours lab. Formerly known as GEOG 311.

### **GEOG 3605. Geography in the Elementary and Middle School Classroom. Units: 3**

Introduces liberal studies students to geography in the California/Social Science Standards. Students learn to integrate geographic principles and theories with the other social sciences. May not be counted toward fulfillment of requirements in the geography major or minor. Formerly known as GEOG 300.

### **GEOG 3630. Environmental Justice. Units: 3**

Semester Prerequisite: Junior or Graduate standing or with instructor consent  
Examines how and why inequalities arise and are maintained in environmental policy and management, distribution of environmental benefits and hazards, and historical and contemporary factors that shape the environmental justice movement.

### **GEOG 3701. Environmental Policy and Impact Assessment. Units: 3**

Semester Corequisite: Must be Junior standing or greater  
This course provides an introduction to environmental policy/laws including the policy process, behavior of interest groups and the actions of policymakers across local, state and federal government entities. Focus will also be given to the historical context of environmental policies and the role of science and stakeholders in evolving environmental policies and related programs. The course will also examine significant environmental issues such as pollution control, climate change, habitat conservation and the protection of biodiversity.

### **GEOG 3710. Advanced Geographic Information Systems. Units: 4**

Semester Prerequisite: GEOG 2250 or consent of instructor. Quarter Prerequisite: GEOG 202 or consent of instructor  
Advanced study of the principles and theories in geographic information systems (GIS). Emphasis on Raster data analysis, Network Analysis, 3D analysis etc. Students will be able to solve complex spatial problems using GIS concepts and GIS software packages. Three hours lecture and two hours activity. Formerly offered as GEOG 308.

### **GEOG 3730. Geo-Spatial Analysis. Units: 3**

Semester Prerequisite: GEOG 2250 or consent of instructor. Quarter Prerequisite: GEOG 202 or consent of instructor  
This course is an advanced course in geographic techniques focusing on analytical methods and implementation strategies. It is designed to examine the concepts and applications of spatial statistics in Geography. Upon completion of this course, students will demonstrate the ability to analyze geographic data from a spatial statistics perspective. Formerly offered as GEOG 315.

### **GEOG 3900. Emerging Topics in Human Geography. Units: 3**

Semester Prerequisite: Junior or Senior standing or with instructor consent  
Examination of emerging topics of current interest in human geography. May be repeated for credit, as topics change. Formerly known as GEOG 390.

### **GEOG 3901. Emerging Topics in Physical Geography. Units: 3**

Semester Prerequisite: Junior or Senior standing or with instructor consent  
Examination of emerging topics of current interest in physical geography. May be repeated for credit, as topics change.

### **GEOG 3902. Emerging Topics in Environmental Studies. Units: 3**

Semester Prerequisite: Junior or Senior standing or with instructor consent  
Examination of emerging topics of current interest in environmental studies. May be repeated for credit, as topics change.

### **GEOG 3903. Emerging Topics in Global Studies. Units: 3**

Semester Prerequisite: Junior or Senior standing or with instructor consent  
Examination of emerging topics of current interest in global studies. May be repeated for credit, as topics change.

### **GEOG 3904. Emerging Topics in GIS and Spatial Techniques. Units: 3**

Semester Prerequisite: Junior or Senior standing or with instructor consent  
Examination of emerging topics of current interest in geographic information systems (GIS) and spatial techniques. May be repeated for credit, as topics change.

### **GEOG 4050. Geography of California. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor  
Exploration of California's natural and cultural environments with emphasis on social and economic issues, and nature society relations. Formerly known as GEOG 302.

**GEOG 4055. US-Mexico Border Region. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor

Introduction to U.S.-Mexico border issues, including the social interactions and processes that distinguish the area. Analysis will focus on the characteristics of everyday life as shaped by political, economic, and cultural issues from inside and outside the region. Formerly known as GEOG 322.

**GEOG 4060. Emerging World Regions. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor

Geographic exploration of one or all of the emerging regions of the world, including economic, political, social, cultural, and environmental issues. Formerly known as GEOG 312.

**GEOG 4070. Advanced World Regions. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor

Geographic exploration of one or all of the advanced regions of the world, including economic, political, social, cultural, and environmental issues. Formerly known as GEOG 313.

**GEOG 4080. Geography of Tourism. Units: 3**

Semester Prerequisite: Upper division standing or permission from instructor

Examination of tourism as a global, national and local phenomenon, with economic, social, and environmental impacts; tourism trends; mass versus alternative tourism.

**GEOG 4250. Watershed Hydrology and Management. Units: 4**

Quarter Prerequisite: GEOG 1030 or consent of instructor

This course will explore the basic principles of surface hydrology: relationships between atmospheric, surface, and groundwater phenomena; streamflow and flood prediction; water supply and quality. Surface hydrology will be observed using the watershed scale to determine how human-environmental relationships in one reach of the watershed may impact water resources in other reaches of the same watershed. The Clean Water Act and localized water management strategies including stormwater best management practices will also be discussed. Materials fee required. Three hours lecture and three hours lab. Formerly known as GEOG 470.

**GEOG 4300. Biogeography. Units: 4**

Semester Prerequisite: BIOL 1000; and GEOG 1030 or GEOL 1000; and GEOG 2250; or consent of instructor. Quarter Prerequisite: BIOL 100 or HSCI 120; and GEOG 103; or consent of instructor

Analysis of spatial and temporal distributions of organisms in the environment at multiple scales, to understand the effects of physical, biological, and historical conditions on patterns of abundance and diversity of taxa in regions. Application of concepts to habitat conservation planning will be discussed, as will methods for determining spatial patterning. Materials fee required. Three hours lecture and three hours lab. Formerly known as GEOG 370.

**GEOG 4360. Climate Change. Units: 3**

Semester Prerequisite: GEOG 1030 or GEOL 1000. Quarter Prerequisite: GEOG 103 or GEOL 101

An examination of past climates, modern climates, and evidence for future climate change. Students are required to attend two-weekend field trips. Formerly known as GEOG 365.

**GEOG 4400. Geomorphology. Units: 3**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or consent of instructor. Quarter Prerequisite: GEOG 103 or GEOL 101 or consent of instructor

Landforms and the processes that create them. Multi-day field trip required.

**GEOG 4450. Globalization and Identity. Units: 3**

Semester Prerequisite: Junior or senior status or permission of the instructor

Explores how globalization influences individual identities, group identities, and societal identities. Study of the origin and evolution of national, ethnic and supranational identities and how global forces are connected to these developments. Ethno-nationalism, territorial conflict as connected to globalization and identity interaction will be examined.

**GEOG 4651. Coastal Resources Management. Units: 4**

Semester Prerequisite: GEOG 1030, GEOL 1000 or consent of instructor

This course is an interdisciplinary approach to understanding the complex relationships between coastal resources and human activities. Coastal environment, coastal resources, structure and role of government in coastal resources policy, critical research issues in coastal and estuarine ecology, coastal geosciences, marine affairs and policy, and maritime studies will be assessed through local, regional and international case studies. Participation in a Saturday field trip, lab and materials fee required.

**GEOG 4710. Water Wars. Units: 3**

Semester Corequisite: Must have junior standing

This course will explore how historic and present-day approaches to water resource management and changing environmental conditions have resulted in water scarcity across various geographical scales. Students will explore the complex issues surrounding "water wars" through a series of case studies that assess the cultural, political and environmental relationships that culminate in the scarcity of water resources for humans and ecosystems alike.

**GEOG 4750. Ecosystem Assessment. Units: 4**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or HSCI 1200; and GEOG 2250. Prerequisite: GEOG 103 or GEOL 100 or HSCI 120; and GEOG 202

Concepts, techniques, and field methods used to identify and prescribe best management practices for sustaining ecosystem integrity in disturbed landscapes. This course uses a hands on approach to develop skills used to quantitatively measure and assess ecological conditions for environmental monitoring applications, including field sampling methods and data analysis of soils, vegetation types, wildlife habitat, and interactions with environmental systems. Materials fee required.

**GEOG 4850. Web GIS. Units: 4**

Semester Prerequisite: GEOG 2250 or consent of instructor. Prerequisite: GEOG 202

This course provides students with the state-of-art technical skills and knowledge necessary to develop Web GIS applications and to manage Web GIS. Upon completion of this course, students are able to understand the basic concepts of Web GIS and grasp the latest techniques in developing Web GIS applications. Three hours lecture and two hours activity.

**GEOG 4860. GIS and Socio-Economic Applications. Units: 4**

Semester Prerequisite: GEOG 2250 or consent of instructor. Quarter Prerequisite: GEOG 202 or consent of instructor

This course will prepare students with advanced knowledge and skills for several applications of GIS in Social sciences. It will include applications in but not limited to Urban Information Systems, Business and Market analysis, Geodemographic, Health, and Crime Analysis. It will include major debates and developments in GIS and with a high level of skills for use of software, hardware for analyzing and visualizing of geographic data. The class will include guest speakers, lectures, lab/activity, and independent and a group projects to ensure a strong relationship between several concepts and several applications. Three hours lecture and two hours laboratory. Materials fee required. Formerly known as GEOG 402.

**GEOG 4870. Environmental GIS. Units: 4**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or HSCI 1200; and GEOG 2250. Quarter Prerequisite: GEOG 103 or GEOL 100 or HSCI 120; and GEOG 202

Introduction to concepts, methods, techniques, tools, and geospatial data used in geographical information systems (GIS) for environmental analyses, modelling, and decision making. Materials fee required.

**GEOG 4880. Remote Sensing of the Environment. Units: 4**

Semester Prerequisite: GEOG 2250 or consent of instructor. Quarter Prerequisite: GEOG 103 or consent of instructor

Fundamental principles and techniques of remote sensing, Remotely-sensed data acquisition, processing, interpretation, and analysis, as well as photogrammetry, are covered. Upon completion of this course, students will understand the basic concept of remote sensing, know the various types of remotely-sensed data and satellite programs, and grasp the techniques of analyzing and interpreting both analog and digital images. Three hours lecture and two hours activity. Formerly GEOG 306 and GEOG 406.

**GEOG 5000. Senior Seminar. Units: 2**

Quarter Prerequisite: Senior standing in GEOG or ENVS

An assessment of academic progress is required of all geography, geography with global studies concentration, and environmental studies majors. Formerly known as GEOG 500.

**GEOG 5004. Advanced Field Methods in Geography. Units: 3**

Semester Prerequisite: GEOG 1030 or GEOL 1000 or HSCI 1000 or GEOG 2249. Prerequisite: GEOG 103 and 201

Semester Corequisite: Must be junior or senior class standing

Advanced methods and techniques for the acquisition of geographic data from direct field measurement and observations. One hour lecture and six hours field activity. Materials fee required.

**GEOG 5150. Global Governance and the United Nations System. Units: 3**

Explores the inner workings of the principal organs of the United Nations (UN) and the related agencies. Examines how the global community is connected to the UN system and how the UN attempts to address issues around the globe in the local, regional, national and international networks. Shows how the UN tries to manage these international issues relating to international peace and security and humanitarian situations. Satisfies GE D4/UD-4, G designation, Global Connections pathway.

**GEOG 5240. National Parks and Public Lands. Units: 3**

Semester Prerequisite: Junior or Graduate standing or with instructor consent

Provides a survey of the environmental, cultural, and political geography of national parks and public lands of the United States. This course will explore how the U.S. national park model developed and how it shaped public land environmental policy and management in the United States and the world. Cultural and natural resources, environmental and social justice, tourism, outdoor recreation, and economic impact will be assessed through local, national, and international case studies. Experiential learning activities will include field site visits to national and/or state parks and community engagement with park managers and environmental associations. The course is open to both undergraduates and graduate students. Participation in Friday and/or Saturday field trips. Materials fee required.

**GEOG 5300. Advanced Topics in Human Geography. Units: 3**

Semester Prerequisite: Senior or Graduate standing or with instructor consent

Provides an in-depth analysis of a current topic being examined by human geography. This course is intended to allow students to apply knowledge gained in other human geography courses to explore a current topic in a critical manner. The course is open to both undergraduates and graduate students. May be repeated for credit as topics change.

**GEOG 5301. Advanced Topics in Environmental Studies. Units: 3**

Provides an in-depth analysis of a current topic being examined by environmental studies. This course is intended to allow students to apply knowledge gained in other geography and environmental studies courses to explore a current topic in a critical manner. The course is open to both undergraduates and graduate students. May be repeated for credit as topics change.

**GEOG 5302. Advanced Topics in Global Studies. Units: 3**

Semester Prerequisite: Senior or Graduate standing or with instructor consent

Provides an in-depth analysis of a current topic being examined by global studies. This course is intended to allow students to apply knowledge gained in other global studies courses to explore a current topic in a critical manner. The course is open to both undergraduates and graduate students. May be repeated for credit as topics change.

### **GEOG 5303. Advanced Topics in GIS and Spatial Techniques. Units: 3**

Semester Prerequisite: Senior or Graduate standing or with instructor consent

Provides an in-depth analysis of a current topic being examined by GIS and Spatial Technique scholars. This course is intended to allow students to apply knowledge gained in other GIS and Spatial Technique courses to explore a current topic in a critical manner. The course is open to both undergraduates and graduate students. May be repeated for credit as topics change.

### **GEOG 5351. Professional Conferences. Unit: 1**

Semester Corequisite: Must be junior or senior class standing  
Introduction to the role of conferences in professional development, including practice in the preparation and exhibition of research by posters, oral presentations, and panel discussions. Students attend a professional conference to participate in research presentations and guided field trips. May require fees for conference registration and travel. Graded credit/no credit.

### **GEOG 5352. Professional Conferences. Units: 2**

Semester Corequisite: Must be junior or senior class standing  
Introduction to the role of conferences in professional development, including practice in the preparation and exhibition of research by posters, oral presentations, and panel discussions. Students attend a professional conference to participate in research presentations and guided field trips. May require fees for conference registration and travel. Graded credit/no credit.

### **GEOG 5551. Laboratory Experience. Unit: 1**

Concepts and practice in the application of laboratory methods to analyze samples of environmental materials and data for a variety of directed research topics. May be taken two times for two units in the Environmental Studies major. Graded CR/NC.

### **GEOG 5552. Laboratory Experience. Units: 2**

Concepts and practice in the application of laboratory methods to analyze samples of environmental materials and data for a variety of directed research topics. This course may also include fieldwork to collect sample materials and data. May be taken two times for four units. Graded credit/no credit.

### **GEOG 5651. Field Experience. Unit: 1**

Application of concepts learned through practice of field methods for a variety of topics in environmental monitoring. May be taken two times for two units.

### **GEOG 5652. Field Experience. Units: 2**

Application of concepts learned through practice of field methods for a variety of topics in environmental monitoring. May be taken two times for four units. Graded credit/no credit.

### **GEOG 5751. Internship in Geography. Unit: 1**

Quarter Prerequisite: Consent of Internship Coordinator for the Department of Geography and Environmental Studies  
Supervised work in public or private organizations emphasizing practical applications of geographic concepts. Approximately 30 hours are required for one unit of credit. May be taken only once for credit. Graded credit/no credit. Formerly known as GEOG 575D.

### **GEOG 5752. Internship in Geography. Units: 2**

Quarter Prerequisite: Consent of Internship Coordinator for the Department of Geography and Environmental Studies  
Supervised work in public or private organizations emphasizing practical applications of geographic concepts. Approximately 60 hours are required for two units of credit. May be taken only once for credit. Graded credit/no credit.

### **GEOG 5753. Internship in Geography. Units: 3**

Quarter Prerequisite: Consent of Internship Coordinator for the Department of Geography and Environmental Studies  
Supervised work in public or private organizations emphasizing practical applications of geographic concepts. Approximately 90 hours are required for three units of credit. May be taken only once for credit. Graded credit/no credit.

### **GEOG 5755. Model United Nations Practicum (Fall Semester MUN Team). Units: 3**

Quarter Prerequisite: By instructor consent  
An analysis of the role of the United Nations in world politics to prepare students for the National United Nations or related Model United Nations conferences. May be repeated for credit for a maximum of nine units. Students wanting to take this class have to go through the CSUSB Model UN Program Selection Process. Formerly PSCI 515 and SSCI 515. Instructor consent is required to enroll.

### **GEOG 5756. Model United Nations Practicum (Spring Semester MUN Team). Units: 3**

Quarter Prerequisite: By instructor consent  
An analysis of the role of the United Nations in world politics to prepare students for the National United Nations or related Model United Nations conferences. May be repeated for credit for a maximum of nine units. Students wanting to take this class have to go through the CSUSB Model UN Program Selection Process. May be taken three times for nine units. Department consent is required. Formerly PSCI 515 and SSCI 515.

### **GEOG 5761. Study Abroad. Unit: 1**

Quarter Prerequisite: Consent required  
Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in an international setting through a pre-approved study abroad program at CSUSB. Department consent required.

### **GEOG 5762. Study Abroad. Units: 2**

Quarter Prerequisite: Consent required  
Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in an international setting through a pre-approved study abroad program at CSUSB. Department consent required.

### **GEOG 5763. Study Abroad. Units: 3**

Quarter Prerequisite: Consent required  
Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in an international setting through a pre-approved study abroad program at CSUSB. Department consent required.

### **GEOG 5771. Study Away. Unit: 1**

Quarter Prerequisite: Consent required  
Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in a US domestic setting at a pre-approved study away site. Department consent required.

**GEOG 5772. Study Away. Units: 2**

Quarter Prerequisite: Consent required

Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in a US domestic setting at a pre-approved study away site. Department consent required.

**GEOG 5773. Study Away. Units: 3**

Quarter Prerequisite: Consent required

Explore issues related to geography, environmental studies, global studies and/or GIS and spatial techniques in a US domestic setting at a pre-approved study away site. Department consent required.

**GEOG 5781. Service Learning in Geography, Global Studies and Environmental Studies.****Unit: 1**

Application of scholarship in geography, global studies, and environmental studies in a planned service experience in the community. This course will reinforce students' understanding of civic responsibility and engagement, and commitment to the community. May be taken three times for three units.

**GEOG 5782. Service Learning in Geography, Global Studies and Environmental Studies.****Units: 2**

Application of scholarship in geography, global studies and environmental studies in a planned service experience in the community. This course will reinforce student's understanding of civic responsibility and engagement, and commitment to the community. May be taken three times for six units.

**GEOG 5783. Service Learning in Geography, Global Studies and Environmental Studies.****Units: 3**

Application of scholarship in geography, global studies and environmental studies in a planned service experience in the community. This course will reinforce student's understanding of civic responsibility and engagement, and commitment to the community. May be taken three times for nine units.

**GEOG 5951. Independent Study. Unit: 1**

Quarter Prerequisite: A minimum overall grade point average of 3

A maximum of six units of independent study may be applied toward the major and graduation. Consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.

**GEOG 5952. Independent Study. Units: 2**

Quarter Prerequisite: A minimum overall grade point average of 3

A maximum of six units of independent study may be applied toward the major and graduation. Consent of instructor and departmental approval of a written proposal submitted on a standard application filed in advance of the semester in which the course is to be taken. May be taken three times for six units. Formerly GEOG 595B.

**GEOG 5953. Independent Study. Units: 3**

Quarter Prerequisite: A minimum overall grade point average of 3

A maximum of six units of independent study may be applied toward the major and graduation. Consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken. May be taken two times for six units. Formerly known as GEOG 595C.

**GEOG 5970. Senior Honors Project - Geography. Units: 3**

Quarter Prerequisite: Earned grade point average of at least 3.0 or better overall as an undergraduate, and at least 3.5 in the major, both at this university and overall

Original scholarly work in Geography, culminating in a significant research report. Enrollment is limited to students whose formal application for departmental honors is approved. Graded credit/no credit.

**GEOG 5971. Senior Honors Project - Environmental Studies. Units: 3**

Quarter Prerequisite: Earned grade point average of at least 3.0 or better overall as an undergraduate, and at least 3.5 in the major, both at this university and overall

Original scholarly work in Environmental Studies, culminating in a significant research report. Enrollment is limited to students whose formal application for departmental honors is approved. Graded credit/no credit.

**GEOG 5972. Senior Honors Project - Global Studies. Units: 3**

Quarter Prerequisite: Earned grade point average of at least 3.0 or better overall as an undergraduate, and at least 3.5 in the major, both at this university and overall

Original scholarly work in Global Studies, culminating in a significant research report. Enrollment is limited to students whose formal application for departmental honors is approved. Department consent required. Graded credit/no credit.

**GEOG 6000. Proseminar in Geography. Units: 2**

Semester Prerequisite: Graduate student standing or consent of the instructor. Quarter Prerequisite: Consent of instructor

Survey of the concepts and ideas that geographers employ to study, describe and analyze globalization. Formerly known as GEOG 600.

**GEOG 6100. Military Geography for National Security. Units: 3**

Semester Prerequisite: Graduate student standing or instructor consent  
Examination of the terrain, climate and other physical geography factors that affect national security. Formerly known as GEOG 610.

**GEOG 6101. Advanced Studies in Global Studies. Units: 3**

Semester Prerequisite: Graduate student standing or consent of the instructor

Intensive study of a current pressing issue facing the global studies discipline. May be taken three times for nine units as the topic changes.

**GEOG 6102. Advanced Studies in Global Analysis. Units: 3**

Semester Prerequisite: Graduate student standing or consent of the instructor

Intensive study of a current pressing issue ('wicked problem') facing the global community. May be taken three times for nine units as the topic changes.



### **GEOG 6300. Advanced Environmental Sustainability in the 21st Century. Units: 3**

Quarter Prerequisite: Previous undergraduate course in data and policy analysis or consent of instructor

This course explores how human activities can be altered to meet the needs of both current and future generations to ensure long-term sustainability of the Earth's environmental systems and resources. Topics include, but are not limited to, sustainable approaches to agricultural production, urban development, resource conservation, and stakeholder inclusion across varying geographical scales including the CSUSB campus and surrounding communities. Students will conduct comprehensive analysis of data and policies as they relate to sustainable initiatives and disseminate findings into a format that is useful for diverse audiences.

### **GEOG 6400. Advanced Watershed Hydrology and Management. Units: 4**

Quarter Prerequisite: GEOG 103 and Intro to GIS or consent of instructor

This course will explore advanced principles of surface hydrology; relationships between atmospheric, surface and groundwater phenomena; streamflow and flood prediction; water supply and quality. Surface hydrology will be observed using the watershed scale to determine how human-environmental relationships in one reach of the watershed may impact water resources in other reaches of the same watershed. The Clean Water Act and localized water management strategies including stormwater best management practices will also be discussed. Three hours lecture and three hours lab. Materials fee required.

### **GEOG 6500. Environmental Issues of Land Management. Units: 3**

Semester Corequisite: GEOG 650

Study of multiple-use management of non-urban land by local government. Emphasis will be placed on recreation, mining, and the maintenance of open space, biotic habitat, and air and water quality. The California Environmental Quality Act (CEQA) and related issues will also be addressed. Formerly known as GEOG 650.

### **GEOG 6990. Continuous Enrollment for Graduate Candidacy Standing. Units: 0**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6991. Continuous Enrollment for Graduate Candidacy Standing. Unit: 1**

Quarter Prerequisite: Advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6992. Continuous Enrollment for Graduate Candidacy Standing. Units: 2**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6993. Continuous Enrollment for Graduate Candidacy Standing. Units: 3**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6994. Continuous Enrollment for Graduate Candidacy Standing. Units: 4**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6995. Continuous Enrollment for Graduate Candidacy Standing. Units: 5**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **GEOG 6996. Continuous Enrollment for Graduate Candidacy Standing. Units: 6**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.