INTRODUCTION

Geography is the study of the earth as the home of humanity. Geography provides a broad understanding of the processes that unite people, places and environments. Geographers explore the diverse regions of the contemporary world in pursuit of global understanding. They tie together the study of human spatial organizations and cultural landscapes with an in-depth investigation of the earth's landforms, climates and vegetation. Their methods range from fieldwork in foreign areas to advanced information technologies like computerized geographic information systems and remote sensing. Geography graduates find rewarding careers in environmental analysis and planning, business, government agencies and education.

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following learning goals and learning outcomes have been established for students pursuing a degree in Geography:

Personal, civic, educational and career
- Students’ interests reflect the diversity of the discipline
- Students prepared to thrive in a world of shrinking distances and global economies
- Students have access to courses that prepare them for graduate school and careers in planning, environmental analysis, education and geospatial technologies

Intellectual inquiry and effective communication
- Understand the patterns and processes of human and physical geography including the interaction between humanity and the earth's environments
- Appreciate the values of intellectual inquiry involving both synthesis and analysis
- Develop skills of observation and measurement needed for geographic inquiry
- Communicate with maps as well as text and graphics

Technology
- Solve problems using advanced Geographic Information Systems and remote sensing technology
- Understand the role of the Internet for accessing geographic information

Multi-cultural environments
- Develop a strong global perspective
- Understand the diversity of the earth’s peoples and environments

Collaborative experiences
- Experience substantial involvement with small group learning
- Interact with faculty outside of classroom
**BACHELOR OF ARTS IN GEOGRAPHY (120 UNITS)**

The Bachelor of Arts in Geography requires at least 39 units in the major – of which at least 21 must be in upper-division courses – plus General Education, all-university requirements and free electives. Students may satisfy some requirements with equivalent coursework taken at other institutions. Courses toward the major must be passed with a “C” (2.0) or better. Students are encouraged to take additional geography courses beyond the minimum required for the major.

**Credential Information**

The bachelor’s degree in geography may be effectively combined with subject matter studies necessary for either the multiple subject teaching credential (K-8) or single subject credential (7-12) in social studies. Undergraduates are encouraged to work with the Center for Careers in Teaching (657-278-7130) as early as possible in their academic careers to plan efficient course selections for general education, the major and electives. With careful planning, it may be possible to enter the credential program in the senior year of the bachelor’s degree. Postgraduate students should contact the Admission to Teacher Education office in the College of Education (657-278-3352) to obtain information on attending an overview presentation.

**Core Courses (15 units)**

- GEOG 100 Global Geography (3)
- GEOG 110 Introduction to the Natural Environment (3)
- GEOG 160 Human Geography (3)
- GEOG 281 Map Making with GIS (3)

Three additional units from courses numbered 280 to 289

**Upper-Division Courses**

- **Environmental Geography (3 units)**
  - GEOG 329 Cities and Nature (3)
  - GEOG 350 Nature and Society (3)

- **Human Geography (3 units)**
  - GEOG 357 Spatial Behavior (3)
  - GEOG 360 Geography of the World’s Economies (3)
  - GEOG 370 Cities and Suburbs (3)
  - GEOG 375 Population Geography (3)

- **Physical Geography (3 units)**
  - GEOG 323 Weather and Climate (3)
  - GEOG 325 Natural Vegetation (3)

- **Regional Geography (3 units)**
  - Select from courses numbered 330 to 349

- **Advanced Geography (6 units)**
  - Select from courses numbered 400 to 489

**Geography Elective (3 units)**

Select lower- or upper-division courses not used to satisfy any other requirement

**Upper-Division Writing Requirement (3 units)**

GEOG 300A Geographical Thought (3)

**Capstone Requirement**

Prior to graduation, each student must demonstrate a critical understanding of the major processes that shape the earth’s landscapes, regions and places, and that influence human interaction with the earth’s cultural and physical environments. This requirement will be met through satisfactory completion of one of the following capstone courses:

- GEOG 422, 425, 426, 450, 452, 475, 478, 488

Units earned from the capstone course can be used to satisfy the Advanced Geography or Geography Elective requirements of the Geography Major.

**EMPHASIS IN ENVIRONMENTAL ANALYSIS (39 UNITS)**

Geography graduates often find employment in such areas as environmental planning and related technical fields. For this reason, an optional upper-division emphasis in environmental analysis is available within the major.

**Core Courses (15 units)**

- GEOG 100 Global Geography (3)
- GEOG 110 Introduction to the Natural Environment (3)
- GEOG 160 Human Geography (3)
- GEOG 281 Map Making with GIS (3)

Three additional units from courses numbered 280 to 289

**Upper-Division Courses**

- **Environmental Geography (3 units)**
  - GEOG 350 Nature and Society (3)

- **Human Geography (3 units)**
  - GEOG 357 Spatial Behavior (3)
  - GEOG 360 Geography of the World’s Economies (3)
  - GEOG 370 Cities and Suburbs (3)
  - GEOG 375 Population Geography (3)

- **Physical Geography (6 units)**
  - GEOG 312 Geomorphology (3)
  - GEOG 323 Weather and Climate (3)
  - GEOG 325 Natural Vegetation (3)

- **Regional Geography (3 units)**
  - Select from geography courses numbered 330 to 347

Three units from geography courses numbered 330 to 347
**Advanced Geography (6 units)**
- GEOG 422  Global Climate Change (3)
- GEOG 425  Tropical Rainforests (3)
- GEOG 426  The Coastal Environment (3)
- GEOG 482  Environmental Impact Assessment (3)
- GEOG 488  Land Use Analysis (3)

**Upper-Division Writing Requirement (3 units)**
- GEOG 300A  Geographical Thought (3)

**Capstone Requirement**
Prior to graduation, each student must demonstrate a critical understanding of the major processes that shape the earth’s landscapes, regions and place, and that influence human interaction with the earth’s cultural and physical environments. This requirement will be met through satisfactory completion of one of the following capstone courses:
- GEOG 422, 425, 426, 450, 452, 488

Units earned from the capstone course can be used to satisfy the Advanced Geography requirement of the Emphasis in Environmental Analysis.

**MINOR IN GEOGRAPHY (21 UNITS)**
The minor in geography serves students seeking a geographic perspective to complement their major. The study plan includes GEOG 100 and three units from the following: 110, 120, 160 or 281; and a minimum of 12 units of upper-division work. All courses counted toward the minor must be passed with a "C" (2.0) or better. Faculty advisers are available to help students structure their minor in geography.

**MASTER OF ARTS IN GEOGRAPHY (30 UNITS)**
This program provides advanced study in human and physical geography with an emphasis on theory and research. Graduates are prepared in the application of interpretive and analytical concepts and techniques to a broad spectrum of geographic situations. Such study directly serves those whose careers involve urban, regional, and environmental planning and geographic education. Geographic perspectives and methods are highly applicable to a wide range of careers in business, industry and government.

**Admission and Conditional Classification**
Students must meet the CSU requirements for admission to a master’s degree program. Please consult the Graduate Admissions section in this catalog for complete information. In addition, the department requires a grade-point average of at least 3.0 in the last 60 semester units attempted and a 3.0 grade-point average in all geography courses. Students who have no, or a limited, background in geography will be expected to make up the deficit by taking appropriate coursework in consultation with the departmental graduate adviser.

All students are required to demonstrate competency in each of geography’s four main subfields: human, physical, regional and technical. Competency is normally demonstrated by completion of at least 18 units at the upper-division or graduate level with a 3.0 grade-point average.

**Graduate Standing – Classified**
After completing all prerequisites and removing deficiencies, the student must develop an approved study plan in consultation with a personal faculty adviser and the graduate program adviser in order to be classified.

All students must complete six units of upper-division technical courses. Three units are prerequisite to classified standing. If the remaining three units were not taken as undergraduate work, they may be included in the study plan.

**Required Courses**
- GEOG 500  Seminar in Geographic Research (3)
- GEOG 520  Seminar in Physical Geography (3)
- GEOG 550  Seminar in Human Geography (3)
- GEOG 599  Independent Graduate Research (3)

One additional 500-level geography course (3)

**Electives (12-15 units)**
Senior-level or graduate coursework in geography (15 units unless approved for thesis; may include additional GEOG 500-level courses; up to six units from related fields).

**Thesis or Comprehensive Exam (0-3 units)**
- GEOG 598  Thesis (3) (department approval required)

Students must follow one of two plans – Plan A, requiring a comprehensive examination; or Plan B, requiring a thesis.

Plan A requires the development of a specific field of interest and a written, three-part comprehensive exam testing knowledge in human geography, physical geography and the student’s specified area of interest. The examination may be repeated only once. Plan B requires the development of a specific field of interest, a written thesis and a subsequent oral defense.

All students will follow Plan A unless approval for the thesis option is granted. In order to follow Plan B, the thesis option, students must have the written consent of their thesis supervisor and all members of a thesis committee. Permission to write a thesis may be granted only to students who have: (1) achieved a 3.25 grade-point average after 15 units of upper-division and graduate coursework; and (2) demonstrated proficiency in research and writing skills.

For further details or advisement, communicate with the Department of Geography graduate program adviser.
GEOGRAPHY COURSES

Courses are designated as GEOG in the class schedule.

100 Global Geography (3)
Introduction to world’s geographical regions. Cultural patterns and their evolution in diverse physical environments. One or more sections offered online.

110 Introduction to the Natural Environment (3)
Prerequisite: completion of General Education (G.E.) Category B1 or B4. Introduction to the major components of the physical environment, including landforms, climate, natural vegetation and soils. One or more sections offered online.

120 Global Environmental Problems (3)
Prerequisite: completion of G.E. Category B.1. Geographical analysis of the Earth’s principal environmental problems. Subjects include population growth, agriculture and pesticides, climate change, forestry and fishing, energy, endangered species and appropriate development. One or more sections offered online.

160 Human Geography (3)
Prerequisite: completion of G.E. Category D.1. An Introduction to Human Geography. Understanding the regional distribution of language, religion, population, migration and settlement patterns, political organization, technology, methods of livelihood over the earth. One or more sections offered online.

220 Introduction to Gender and Social Space (3)
(5ame as WMST 220)

281 Map Making with Geographic Information Systems (3)
Principles and practice of effective map making using computerized geographic information systems technology. (2 hours lecture, 2 hours laboratory)

283 Introduction to Spatial Data (3)
Introduction to the variety of evidence used in geographic analysis and the sources and techniques for acquiring geographic evidence.

300A Geographical Thought (3)
Prerequisites: GEOG 100, 110, 160. Introduction to geographical thought through readings, discussion and writing assignments. Environmental, regional and spatial tradition in geography, and current themes in geographical research. Meets the upper-division writing requirements for geography majors.

300B Geographic Methods (3)
Prerequisite: GEOG 300A. Quantitative and qualitative methods used in geographic research, including statistical techniques such as descriptive statistics, probability, sampling, inferential statistics, correlation and regression, and qualitative methods such as interview and surveys.

312 Geomorphology (3)
Prerequisites: GEOG 110, 101. Landforms and the processes responsible for their evolution.

323 Weather and Climate (3)
Prerequisite: GEOG 110. Atmospheric elements and controls, fronts, severe weather and climatic classification systems.

325 Natural Vegetation (3)
Geography of the globe’s natural vegetation associations. Role of plate tectonics, climate, soils, fire and humans as agents of landscape-level vegetation change.

328 Global Change and Environmental Systems (3)
Prerequisite: completion of G.E. category B.1 or B.4. Introduction to the Earth’s environment in the context of global change. Interdisciplinary discussion of the nature, causes and consequences of the natural and human aspects of global environmental change. One or more sections offered online.

329 Cities and Nature (3)
Prerequisites: completion of G.E. Category B.1 or B.4. Overview of the impact of urbanization on landforms, climate, vegetation, and animals. Planning implications and case studies.

330 California (3)
Landscapes of California, their environmental characteristics, development patterns and current problems. One or more sections offered online.

332 United States and Canada (3)
Prerequisite: completion of G.E. Category D.1. United States and Canada. Interrelated physical and cultural features that give geographic personality to the regions.

333 Latin America (3)
Prerequisite: completion of G.E. Category D.1. Mexico, Central America, the Caribbean and South America. Explores the regions’ physical and cultural landscapes. Emphasizes nature-society problems. One or more sections offered online.

336 Europe (3)
Basic physical and human lineaments of Europe. Elements that distinguish and give character to its major regional divisions.

340 Asia (3)
Prerequisite: completion of G.E. Category D.1. Physical, human and regional geography of Asia, from Pakistan and India through Southeast Asia and the Malay Archipelago to China, Japan and Korea. One or more sections offered on line.

342 The Middle East (3)
Prerequisite: completion of G.E. Category D.1. Geography of the Middle East from North Africa to Central Asia, with emphasis on the region’s physical, cultural, historical, economic, and political geography and contemporary issues facing the region.
344 Africa (3)
Physical, human and regional geography of Africa. Saharan borderlands, East Africa and Southern Africa.

345 China (3)
Prerequisite: completion of G.E. Category D.1. China’s spatial organization, emphasizing spatial patterns of population, migration, regional politics and economies; and China’s many types of physical and cultural environments.

350 Nature and Society (3)
Prerequisite: completion of G.E. Category D.1. Interface between human systems and natural systems. Factors affecting human interaction with the earth, including environmental ethics, public policy and technology.

352 The National Parks (3)
The park system and its evolution as related to conservation, preservation and recreational land use. Cultural heritage and physical environment.

353 Geography of Illegal Drugs (3)
Prerequisite: completion of G.E. Category D.1 and junior or senior standing. Global patterns of illegal drug production and use, including agricultural aspects, trafficking, consumption patterns, political economy, laws and politics, drug tourism, environmental aspects and related issues. Focuses on case studies around the world. One or more sections offered online.

355 Global Cuisine (3)
International dimensions of food and wine traditions in the cultural landscape. Foods and drinks that are wild, tabooed, medicinal, gendered and erotic. Migrant cuisines from Mexico, Europe, Africa, Asia and the Middle East.

357 Spatial Behavior (3)
Geographic approach to perception and behavior in local and global spatial settings.

360 Geography of the World’s Economies (3)
Geographic perspectives on the global production of goods and services and their distribution to consumers. Key geographic issues in uneven development, international trade, investment patterns, and the spatial integration of local and regional economies.

370 Cities and Suburbs (3)
American metropolitan systems and city-region linkages. Theories and spatial models of social and economic patterns within cities and suburbs; planning implications of these locational patterns.

375 Population Geography (3)
Prerequisites: GEOG 160 and junior standing. Theories, models, concepts and facts in the field of population geography, growth and distribution, with an emphasis on birth, death and migration processes.

422 Global Climate Change (3)
Prerequisite: GEOG 323. Physical factors that produce climatic patterns and regional impacts of climate change.

424 Desert Landscapes (3)
Prerequisite: GEOG 110. Desert landscapes, including climate, geomorphology, vegetation, natural history, settlement and unique urban planning challenges. The desert as “place” in geographic literature. Focuses on North American deserts. A field trip is required.

425 Tropical Rainforests (3)
Prerequisites: GEOG 110 and 325 or equivalent. Discussion/seminar examining the geography, ecology and human use of tropical rainforests. Causes and consequences of deforestation, sustainable development and preservation.

426 The Coastal Environment (3)
Prerequisites: GEOG 110; one upper-division physical geography course. An overview of coastal geomorphology, climatology, and plant geography with an emphasis on Southern California. Human interaction, modification, and management of those systems.

450 Human Response to Environmental Hazards (3)
Prerequisites: GEOG 110 and at least one 300-level geography course; GEOG 350 preferred. Issues involved as humans endeavor to minimize the impact of hazards in the environment. Importance of cognition, perception, communication, mitigation and preparedness as societies cope with hazards posed by the natural world and human action.

452 Ecotourism (3)
Evolution and distribution of nature-based tourism. Role of ecotourism in regional development and environmental conservation. Sociocultural impacts in less developed countries.

475 Interpretation of Urban Landscapes (3)
Prerequisites: GEOG 357 or 370 and consent of instructor. Geographic view of the city as a landscape composite of structure, space, place and experience. Emphasizes the European and North American city.

478 Urban Planning Principles (3)
Prerequisite: GEOG 370 or POSC 320. Seminar/discussion on conceptual themes and legal foundations of American urban planning. Policy areas associated with urbanization and suburbanization processes: land use, economic development, redevelopment, housing systems, neighborhood dynamics and growth management. (Same as POSC 478)

480 Field Mapping with GIS and GPS (3)
Prerequisite: GEOG 281. Field-based study of the principles and techniques used in constructing a digital spatial database from field observations utilizing traditional field methods, GIS and GPS technology.
481 Geographic Information Systems: Introduction (3)
   Methods and applications of computer-assisted mapping and geographic information systems. (2 hours discussion, 3 hours lab)

482 Environmental Impact Assessment (3)
   Prerequisites: GEOG 350, 478 or equivalent. Techniques relevant to environmental impact assessment in accord with CEQA (state) and NEPA (federal) regulations. Systematic evaluation of major environmental impact topics. Individual and small team activities.

483 Mountain Field Geography (3)
   Prerequisite: GEOG 119, 281. Summer field study of the physical and environmental geography of mountain systems in the West. Alpine/subalpine glacial action, weather and climate, biogeography, soils, human impacts and sustainability.

484 Urban Planning Methods (3)
   Prerequisite: GEOG 478 or POSC 478. Seminar and Practicum on methods in urban planning. Analytical techniques and basic data sources. Population forecasting, housing surveys, economic development, fiscal impacts and area revitalization. Individual and team projects. (Same as POSC 484)

485 Geographic Information Systems: Principles and Applications (3)
   Prerequisite: GEOG 481 or equivalent. Integrated computer-assisted methods for handling spatial data, including database design, data conversion and updating, information retrieval, analysis, modeling and mapping. Instructional fee.

486 Environmental Remote Sensing (3)
   Prerequisite: MATH 110. Fundamentals of remote sensing science and digital image processing. Remote sensing principles and the processing and interpretation of remotely sensed data using image processing techniques and software.

488 Land Use Analysis (3)
   Prerequisites: junior, senior or graduate standing and consent of instructor. Urban and rural land use and settlement; geographic field problems. Application of geographic techniques and tools to local field studies.

489 Digital Image Processing (3)
   Beginning and advanced techniques in digital image processing. Provides working knowledge of remote sensing with a primary focus on how to analyze and interpret remotely sensed data using image processing techniques. May be repeated once for credit.

495 Internship in Applied Geography (1-3)
   Students work specified number of hours in appropriate public or private organizations under the supervision of their staff and as coordinated by departmental faculty. Interns meet with instructor by arrangement. May be repeated for a maximum of three units of credit.

499 Independent Study (1-3)
   Prerequisite: senior standing. Consent of instructor under whom study will be taken required before enrolling. May be repeated for a maximum of six units of credit.

500 Seminar in Geographic Research (3)
   Prerequisites: graduate standing and consent of instructor. A required seminar to be taken prior to the development of a thesis.

520 Seminar in Physical Geography (3)
   Prerequisite: graduate standing. Research in physical geography: methods and contemporary themes. Case studies in climatology, geomorphology and plant geography.

530T Seminar: Selected Topics in Geography (3)
   Prerequisite: graduate standing. Various topics selected from any of the subfields of geography. The topic chosen and a general outline of the seminar are circulated prior to registration. May be repeated for credit.

550 Seminar in Human Geography (3)
   Prerequisite: graduate standing. Survey of methodology and case studies, including: experiential environments; rural landscapes; urban, social and economic structure; geography and public policy; and Third World development. Meets the graduate level writing requirement.

597 Project (3)
   Prerequisites: GEOG 500 and consent of adviser.

598 Thesis (3)
   Prerequisites: completion of GEOG 500, advancement to candidacy and consent of instructor.

599 Independent Graduate Research (1-3)
   Open to graduate students by consent of instructor. May be repeated for credit.