

# Geography and City and Regional Planning

## The Field of Geography

Geography is an integrative discipline that is composed of both physical and social sciences. Within a spatial framework, analogous to the chronological framework employed in history, geography studies the earth and its human inhabitants.

Central to geographic inquiry is a concern with the human occupation of the earth, the character of the human environment, and the interrelationships that link humans and the physical world. In sum, geography seeks to provide a broad understanding of the world, its people, and its problems. It also seeks to provide applied specializations and technical skills that can address economic, social, and environmental problems at scales that range from local to global.

Not surprisingly, the subject matter of geography is diverse. Geographers examine and analyze patterns of rural and urban settlement, resource exploitation, land use, and social and cultural phenomena. They are concerned with the natural features and processes of the earth's surface, the ways in which nature has conditioned the human occupation of the earth, and the ways in which people have modified natural landscapes.

## The Department of Geography

Instruction at introductory and advanced levels is conducted by a faculty whose teaching and research interests are diverse. All major facets of the disci-

pline are represented, as are a number of specializations, which include medical geography, economic studies of China, urban revitalization, archeological studies, political ecology of natural resource management, environmental monitoring using remote sensing, urban air quality, environmental planning, applications in geographic information systems (GIS), and climate change and global governance.

The department's instructional programs are designed to address several objectives. First, for a large number of our students, we provide an understanding of the world as an element of a liberal education. Second, we conduct programs for majors and minors in geography that assure a depth of knowledge in subject matter and technique. Third, we serve those students in related disciplines who wish to strengthen programs of study through a selection of courses in geography.

## Geography Facilities and Equipment

The Geography Department's facilities include a state-of-the-art Urban Planning and Environmental Research Laboratory and an air pollution research station.

The Urban Planning and Environmental Research Laboratory has 32 workstations with geographic information systems (GIS) software that include ArcGIS 10.x Desktop and several extensions such as a Spatial Analyst, Geostatistical Analyst,

3-D Analyst and Network Analyst, ENVI/IDL (Environment for Visualizing Images), IDRISI with Cartalinx, PCI Geomatica, and Matlab. Hardware in the laboratory includes an HP Scanjet 8200 digital flatbed scanner, a Contex Chameleon TX36 Wide Format Map Scanner, two Trimble GeoExplorer GeoXT GPS receivers, six Garmin GPSMAP 76C5x GPS receivers, six digital cameras, and an HP Designjet 1050C 42-inch color plotter.

The air pollution research station is equipped with cutting-edge environmental monitoring systems such as the Vaisala Digi-CORA Tethersonde System, Eddy Covariance System, and Large Aperture Boundary Layer Scintillometer.

The Geography Department is also home to the Community and Regional Planning Center (CRP Center). The CRP Center is sponsored by the College of Social Sciences. The mission of the CRP Center is to serve as a planning-related knowledge clearinghouse for the Central Valley region. The CRP Center faculty, associates, and students develop and deliver technical assistance to local cities and towns by addressing issues such as land use planning, environmental planning, and zoning.

## Career Opportunities

Geographers are employed in government and the private sector. Their knowledge and skills have applications in a variety of fields including teaching,

**California State University, Fresno**

**Department of Geography**

**559.278.2797**

**B.A. in Geography**  
*Option: City and Regional Planning*

**Minor in Geography**

**Minor in Meteorology**

**Minor in Urban Studies**

**Subject Matter Preparation for Single Subject Teaching Credential in Social Sciences**

**Certificate in Geographic Information Systems (GIS)**

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planning, geographic information systems (GIS), cartography, remote sensing, locational analysis, intelligence and security, land and resource management, policy research, marketing, real estate, transportation, and industrial development.

Federal, state, and local government agencies are major employers of geographers. At the federal level, most of the work opportunities are in the State Department, the intelligence and mapping agencies, the military, the Bureau of the Census, the Geological Survey, and the land and resource management agencies.

At the state and local levels, most employment opportunities involve geographic information systems (GIS), planning, remote sensing, land and resource management, and community development.

Geographers are in demand in the private sector because many businesses and industries have important geographical dimensions to their operations. Private enterprises employ geographers in marketing, real estate, banking, transportation, international trade, utilities, wholesaling and retailing, and a number of other fields.

Teaching at all levels is a major occupation of geography graduates.

A master's degree is necessary for community college teaching; a Ph.D is required for teaching in four-year colleges and universities.

## General Preparation

Individuals who wish to major in geography should have broad interests that encompass the natural and human sphere and the relationships between them.

## High School Preparation

Students should meet California State University's admission requirements in terms of college preparatory course requirements, grade point average, and admission test scores.

## College Program

Students should consult the university's *General Catalog* for university and geography major requirements. Community college transfers should consult their catalogs to ensure that courses taken are CSU transferable (baccalaureate level).

## General Education

Students should complete as many of the Fresno State General Education requirements as possible during the freshman and sophomore years, whether they are attending Fresno State or a community college. Community colleges can certify up to 39 of the units required in Fresno State's General Education pattern.

Students should be made aware that many courses that satisfy General Education requirements may also be double-counted when they are used toward the completion of academic minors, or second majors. Students are therefore advised to coordinate the selection of their General Education courses with their faculty adviser so that they can create the best academic program that can be completed in the least amount of time.

Geography majors are encouraged to select a minor — or even a second major — in a related field. Appropriate minors or second majors may include, but are not limited to, those in natural science fields such as biology, geology, and physical science; those in social science fields such as anthropology, history, political science, sociology, and urban studies; or those in technical science fields such as computer science, information systems and mathematics. Students may pursue a maximum of two minors in their degree program at Fresno State.

## Course Requirements

Since changes may occur, students should consult the *General Catalog* and a California State University, Fresno adviser prior to registering for courses.

### Lower Division

Freshman-Sophomore level courses  
(may be taken at a community college)

Physical Geography: Global Concepts, Weather, and Climate (GEOG 5)

Physical Geography: The Earth's Surface (GEOG 7)

World Geography (GEOG 4)

### Upper Division

Junior-Senior level courses  
(to be taken at Fresno State)

Upper-division requirements vary according to the option selected. Students must consult the catalog for the specifics within each option.

Students interested in professional careers should complete coursework in quantitative methods and geographic technical courses such as geographic information systems (GIS) or remote sensing.

For additional information, write

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Department of Geography

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**PLEASE NOTE:** This document is for general informational purposes only. The information is subject to change; consult the appropriate department or an academic adviser. Entering freshmen must follow the revised General Education program effective fall 1999 and thereafter. The university catalog and schedule of courses are available online at [www.fresnostate.edu/ClassSchedule](http://www.fresnostate.edu/ClassSchedule) and [www.fresnostate.edu/catalog](http://www.fresnostate.edu/catalog).

Revised 7/14