GEOGRAPHY AND ENVIRONMENTAL STUDIES

Geography and Environmental Studies Department (http://www.csuchico.edu/geop/)
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Insight

Geographers use social and natural sciences to creatively study and solve multidisciplinary problems such as climate change and environmental justice, stewardship of natural resources, and sustainable city and rural planning for diverse populations. Human-environment interaction is at the core of geography. Many of our courses address sustainability and climate resilience issues related to wildfire, ecosystem health, global and local food systems, civic engagement, urban development, and environmental policy. The department has a state-of-the-art computer lab for geospatial technology as well as applied field opportunities at the University's ecological reserve—one of the largest and ecologically diverse in California.

The department offers a Bachelor of Arts degree, four minors, and two certificates. Our engaged faculty and staff guide students in well-rounded and high-impact learning both inside and outside the classroom.

Experience

The Department of Geography and Environmental Studies supports a multitude of hands-on field projects and research opportunities in geography coursework. Students put their learning into action in local and campus projects such as the South Campus Project and have presented prize-winning research at professional conferences. Resources for student research and professional development include a dedicated computer lab where students can learn basic to advanced skills in geographic information science and an internship program with diverse opportunities including city and county planning, geographical information system, and natural resource stewardship.

Staff and faculty provide orientation to students working at the department's GeoPlace mapping center, where their work serves campus needs for mapping in teaching and research. Opportunities for active engagement in environmental planning and stewardship occur under faculty leadership at the University's ecological reserves and in partnership with private and public entities.

Generous support from department alumni has created several opportunities for scholarships and awards as well as for career development.

Students have sustained an active geography club that has promoted career training activities, speaker series, field trips, and opportunities for environmental activism on campus and in the community.

Outlook

Our graduates work in public environmental and planning agencies, tribal organizations, nonprofit organizations, and private consulting businesses. Examples of recent employment are the U.S. Forest Service; CalFire; Caltrans; the City of Chico; Butte, Glenn, and Yuba counties; and companies such as Apple and Google, where geospatial technical skills are highly valued. Other students go on to complete graduate degrees within and beyond California State University, Chico.

Geography graduates are especially well-positioned for newly emerging green jobs, such as sustainability managers in private industry.

According to the U.S. Bureau of Labor Statistics, the 2021 median pay for geographers is $85,220; for urban and regional planners is $78,500; for cartographers and photogrammetrists is $68,900; for conservation scientists and foresters is $63,750; and for environmental scientists is $76,530 per year. Many of these professions are projected to grow in the next 10 years.

Programs

Undergraduate

Bachelor's

- Geography BA (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/geography-ba/)

Minors

- Environmental Studies Minor (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/environmental-studies-minor/)
- Geography Minor (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/geography-minor/)
- Geospatial Literacy Minor (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/geospatial-literacy-minor/)
- Planning and Development Minor (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/planning-development-minor/)

Certificates

- Geospatial Technology Certificate (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/geospatial-technology-certificate/)
- Land Use And Environmental Planning Certificate (https://catalog.csuchico.edu/colleges-departments/college-behavioral-social-sciences/geography-environmental-studies/land-use-environmental-planning-certificate/)

See Course Description Symbols and Terms (https://catalog.csuchico.edu/academic-standards-policies/course-description-symbols-terms/) for an explanation of course description terminology and symbols, the course numbering system, and course credit units.

GEOG 101 Earth Systems and Physical Geography **3 Units GE**
Prerequisite: Recommended: High school biology, chemistry, or physics.
Typically Offered: Spring, summer, fall
This course is a survey of the basic processes that determine flows of energy through the atmosphere and examines the subsequent interactions among water, landforms, soil, and vegetation that create and modify the surface of the earth. Students develop a recognition of landscape patterns, as well as an understanding of the physical, chemical, and biological principles and functions that create those patterns, in order to understand the natural environment in which we live and the role of humans affecting that environment. 2 hours activity, 2 hours lecture. (003857)
General Education: Laboratory Activity (B3); Physical Science (B1)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Sustainable Course

GEOG 102 Peoples, Places, and Environments **3 Units GC, GE**
Typically Offered: Fall and spring
Survey of human populations and activities, with an emphasis upon how social, economic, political, and religious institutions influence interrelationships with the physical environment. 3 hours lecture. (003859)
General Education: Social Sciences (D)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Global Cultures

GEOG 105 California Cultural Landscapes **3 Units GE, USD**
Typically Offered: Fall and spring
Broad overview of spatial and temporal changes in the California landscape resulting from the interaction of various cultural groups with their environment. 3 hours lecture. (003860)
General Education: Social Sciences (D)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Sustainable Course; US Diversity

GEOG 106 American West Decolonized **3 Units GE, USD**
Typically Offered: Fall and spring
Re-interpret the diverse environmental and cultural geography of the American West through the comparative lens of human-environmental relationships. Identify the unique influence of Indigenous and settler cultures in shaping the western landscapes. Be inspired by traditional practices being reapplied through diverse partnerships and Indigenous leadership to address social and environmental issues. Recognize sustainable solutions to become an engaged citizen of place through reciprocity and reconciliatory practices. 3 hours lecture. (003861)
General Education: Social Sciences (D)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; US Diversity

GEOG 111 Introduction to Geographic Methods **3 Units**
Typically Offered: Fall only
Introduction to essential geographic problem solving techniques which include: data collection, analysis, and presentation of spatial information. Techniques include map measurement and interpretation, aerial photo analysis, field observations with GPS, introductory geographic information systems, computer cartography, summary of numerical data, elementary probability, distributions, and introduction to statistical inference. This is an introductory tools course for students majoring in geography, the natural and earth sciences, and in such applied fields as planning and recreation. Several software analysis packages are introduced. 3 hours lecture. (015867)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

GEOG 119A Introductory ArcGIS **1 Unit**
Typically Offered: Fall and spring
Introduction of concepts and techniques of geographic information system analysis and the presentation of map data. The course introduces the ArcMap application. Not for geography majors. 1 hour lecture. (020348)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 2 units
Course Attributes: Lower Division

GEOG 139 Visualizing Local Landscapes **3 Units GE**
Typically Offered: Fall and spring
Cultural landscapes are works of the human imagination, and thus can be examined via complementary visual media representing our deepest feelings, beliefs, and intuition about a place. They are a palimpsest that contains the etchings that past and present cultures have inscribed on Earth's surface. Cultural landscapes teem with information about the relationship between different cultures and the physical world, the relationships between privileged and marginalized communities, and, also, reflect how cultures change through time. This course develops a student's appreciation of cultural landscapes by exploring and creating visual media representations using the landscapes of the Greater Chico area. This course acknowledges the wholeness of nature and human experiences in the world, a consciousness approach to viewing, interpreting, and representing landscapes. Students read about, observe, illustrate, and think about local landscapes. 3 hours lecture. (022233)
General Education: Arts (C1)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

GEOG 198 Special Topics **1-3 Units**
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours lecture. (003869)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Lower Division

GEOG 199 Special Problems **1-3 Units**
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 3 hours supervision. (020160)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Lower Division

GEOG 211 Introduction to Geographical Information Systems **3 Units**
Typically Offered: Fall and spring
This course provides an introduction to topics and technology in Geographic Information Systems (GIS). The course will combine a conceptual discussion of topics with practical exercises. Both the theory and practice of GIS analysis will be presented. 3 hours lecture. (021439)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

GEOG 301W Global Economic Geography (W) **3 Units GC, GE, W**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Fall and spring
A systematic survey of human economic activities. Analysis of resource exploitation and use, including agriculture, extractive activities, industry, commerce, and service functions. Recommended for business and liberal arts majors. 3 hours lecture. (021530)
General Education: Upper-Division Social Sciences (UDD); Agriculture, Food, and Environment Pathway; Equity, Ethics, and Policy Pathway
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Global Cultures; Writing Course

GEOG 303 Geography and World Affairs **3 Units GC, GE**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Spring, summer, fall
Geography in the news. Analysis of current world conflicts and problem areas, with an emphasis upon examination of social, economic, political, and environmental realities. 3 hours lecture. (003872)
General Education: Upper-Division Social Sciences (UDD); Global Studies Pathway; Science, Technology, and Society Pathway
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Global Cultures

GEOG 304 Sustainability and Resilience **3 Units GE**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Fall and spring
Geographic analysis of humanity's interaction with the environment. Examines natural and human systems, resources, population, energy, and pollution. Develops an appreciation of the beauty, balance, and complexity of natural systems and human success in attaining harmony with them. Enhances awareness and perception of each individual's role in and with the environment. 3 hours lecture. (003873)
General Education: Upper-Division Social Sciences (UDD); Sustainability and Climate Change Pathway
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 305 Mobile, Wired, and Tracked: Our Digital Planet **3 Units GE**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Fall and spring
Digital mapping, location based services, geo-tracking, crowdsourcing, citizen science and online social networks are critically examined in terms of geographic representation, geographic inquiry, individual privacy, equity, and social justice. An experiential course that develops skills in critical geospatial thinking through inquiry into and analysis of evolving geospatial technologies (e.g. geographic information systems, global positioning systems (GPS), unmanned aerial vehicles (UAVs), and satellite imagery); and explores their impact on the individual and society as they pertain to scientific, technological, social and earth science phenomena. An examination of the role of critical geospatial thinking in daily life and scientific pursuits. 3 hours lecture. (022317)
General Education: Upper-Division Social Sciences (UDD); Innovation, Design, and the Arts Pathway; Science, Technology, and Society Pathway
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 306 Geographies of Disaster **3 Units**
Typically Offered: Fall only odd years
This course adopts a geographical focus to study the impacts of natural and technological hazards at the local, regional, and global scales. The concepts of vulnerability, resilience, and risk are reviewed to examine the spatial and temporal distribution of hazards. Quantitative and qualitative data generated from geographical information systems are used to question, investigate, and draw conclusions about ideas and issues on a selected environmental hazard. In addition to class discussions and readings, students undertake a class project related to a specific disaster event where they explore the environmental, social, and policy implications of disaster preparedness and risk reduction in their project area. Students submit their findings in the form of oral presentations and written reports to practice their writing and critical thinking skills. 3 hours lecture. (003875)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 313 Introductory Cartography **3 Units**
Prerequisite: GEOG 211 or equivalent (may be taken concurrently).
Typically Offered: Fall only
Introduction to the compilation, design, and production of thematic maps. Emphasis is on maps as communication devices. 3 hours lecture. (003880)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 315 Applied Statistical Methods in Geography **3 Units**
Prerequisite: GEOG 211, MATH 105 or equivalents.
Typically Offered: Fall only
Introduction to quantitative analysis of spatial data using single and two sample inference, analysis of variance, correlation, multiple regression, analysis of co-variance, experimental design, repeated measures, nonparametric procedures, categorical data analysis, clustering/ classification, and principal components analysis. Examples are drawn from geographical themes in economics, demography, politics, planning, natural and earth sciences. Statistical packages are introduced. 3 hours lecture. (003881)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 320 Introduction to Land Use Planning **3 Units**
Typically Offered: Fall only
Study of the theory and practice of land use planning. Analysis of planning processes, elements of the comprehensive plan, zoning, environmental impact of development, regional policies, and growth. Includes investigation of a practical planning problem. 3 hours lecture. (003884)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 342 Geomorphology **3 Units**
Prerequisite: ERTH 102, GEOG 101, PSSC 101, or PSSC 250; AGET 340, GEOG 211, GEOG 111.
Typically Offered: Fall only
Systematic analysis of the origin and development of landforms. Emphasis is on the study of geomorphic processes using maps, air photos, and field data. 3 hours discussion. (003926)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 343 Climatology **3 Units**
Prerequisite: ERTH 170 or GEOG 101 or equivalent.
Typically Offered: Fall only
Systematic analysis of the processes and controls of the earth's climatic systems. Use of climatic classification systems; examination of climatic regions, microclimatology, and climatic applications. 3 hours lecture. (003928)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 352 The United States **3 Units GE, USD**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Fall and spring
A regional study of our nation in terms of the physical earth and its human use. The course includes emphasis on issues and problems related to resources, environmental concerns, and settlement patterns. Cultural and regional differences in human-environmental relationships are compared and contrasted. 3 hours lecture. (003902)
General Education: Upper-Division Social Sciences (UDD); Equity, Ethics, and Policy Pathway
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; US Diversity

GEOG 357 Lands and Peoples of Latin America **3 Units GC, GE**
Prerequisite: GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.
Typically Offered: Fall and spring
Study of the physical environment, human settlement, development, and modern problems of the nations of Latin America. 3 hours lecture. (021143)
General Education: Upper-Division Social Sciences (UDD); Global Studies Pathway; Race, Ethnicity, and Sovereignty Pathway
Cross listing(s): LAST 357
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Global Cultures

GEOG 389 Geography Internship **1-3 Units**
Typically Offered: Fall and spring
This internship is offered for 1.0-3.0 units. Students must register directly with a supervising faculty member. The internship provides service learning experience as a volunteer or supervisor in a campus or community environmental organization or agency. Each unit of credit requires a minimum of three hours of activity in the assigned role. 9 hours supervision. (003922)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division

GEOG 398 Special Topics **1-3 Units**
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 2 hours lecture. (003923)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

GEOG 398H Special Topics - Honors **3 Units**
Prerequisite: Junior standing and current enrollment in the Honors Program.
Typically Offered: Inquire at department
In a format designed for students in the Honors Program, this course will present selected topics not covered in the regular curriculum. Topics will vary from one semester to another. See the Class Schedule for the specific topic being offered. 3 hours lecture. (003924)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

GEOG 399 Special Problems **1-3 Units**
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 3 hours supervision. (003925)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

GEOG 405 Conservation, Restoration, and Stewardship **3 Units**
Prerequisite: GEOG 101 or equivalent. Recommended: GEOG 426, GEOG 445 or equivalent.
Typically Offered: Fall only
Degraded ecosystems, increased species extinctions, and the climate crisis are global challenges. Become an ecological fixer. Learn diverse principles and practices to effectively conserve, restore and steward ecosystems in an ever-changing world filled with complex ecological and social interactions. Evaluate and create solutions through experiential learning in various field locations. 3 hours lecture. (003930)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 407W Earth Systems Analysis of Global Change (W) **3 Units W, GW**
Prerequisite: GE Written Communication (A2); Senior standing.
Typically Offered: Spring only
Through discussions and different styles of writing, students examine global change and its impacts on physical environment and human society. Students work together to understand past, current, and future challenges, relating to physical and cultural landscapes. Students from different backgrounds and trainings share knowledge and plan responses to these challenges, including social vulnerability. 3 hours lecture. (015873)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course; Writing Course; Graduation Writing Assessment

GEOG 411 Geospatial Analysis and Modeling in GIS **3 Units**
Prerequisite: GEOG 211, GEOG 313, GEOG 315 or equivalents.
Typically Offered: Spring only
Advanced geospatial analysis and modeling techniques using Geographic Information Systems (GIS). Topics include geoprocessing, Python programming, and geospatial modeling. Students collaborate to design, develop, and present a GIS pilot study. They apply GIS theory and techniques to solve problems in land and resource management, utilities, and municipal government. Covers all stages of a GIS project: planning, design, analysis, and presentation. 1 hour activity, 2 hours lecture. (003942)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 417 Field Techniques **3 Units**
Prerequisite: GEOG 101, GEOG 102, or equivalent.
Typically Offered: Fall only
Evaluate monitoring and research techniques and tools commonly used in field-based geographic, environmental, and social studies. Collect and analyze data to inform decision making and solutions to environmental and social-environmental issues. 6 hours activity. (003939)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 418 Remote Sensing of Environment **3 Units**
Prerequisite: GEOG 211; GEOG 315 or MATH 105, or equivalents.
Typically Offered: Spring only
An introduction to the theory, techniques, data acquisition, processing, and presentation of imagery acquired through aerial photographic and satellite means of remote sensing. Application of basic skills of aerial photographic interpretation and satellite digital image processing and analysis to physical and cultural geographic phenomena. 3 hours lecture. (003941)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 425 Planning for Sustainable Communities and Regions **3 Units**
Typically Offered: Fall only even years
Examination of economic, social, demographic, and political bases for sustainable community and regional development and planning. Introduces the theory, evolution and practice of planning for sustainable communities and regions through examination of environmental, economic, and equity issues. 3 hours discussion. (003947)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 426 Sustainable Water Systems **3 Units**
Prerequisite: GEOG 101 or SCED 101 or equivalents. Recommended: GEOG 304, GEOG 343.
Typically Offered: Spring only
Water is finite, and life on Earth depends on it. Evaluating and creating solutions to complex environmental and social interactions with water is critical to ensuring water for all life. Draw from diverse examples of policy and stewardship that shape sustainable practices to provide socially and ecologically-just outcomes. Field opportunities provide insight to regional examples of water projects, habitats, and social issues. 3 hours seminar. (003948)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 427 Environmental Impact Analysis **3 Units**
Prerequisite: Recommended: GEOG 320.
Typically Offered: Spring only
Study of the legal antecedents to California environmental impact legislation; analysis of environmental review procedures, environmental research, preparation and evaluation of EIRs, and conditional negative declarations. 3 hours discussion. (003949)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 428 Land Use Planning Studio **3 Units**
Prerequisite: Recommended: GEOG 320.
Typically Offered: Spring only even years
Relationship of physical, biotic, cultural, and aesthetic factors to land planning. Techniques of solving site problems dealing with topography, grading, slope stability, seismicity, hydrology, vegetation, wildlife, soils, micro-climate energy use, view-shed, and functional design. Land development projects are analyzed, and plans for new development projects are prepared. 3 hours discussion. (003950)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 429 Environmental and Conservation Planning **3 Units**
Prerequisite: Recommended: GEOG 320.
Typically Offered: Spring only odd years
This course introduces the theory and application of environmental and conservation planning. It critically examines the activities of environmental planning and the analytical approaches that can be used to direct resources toward conservation that yields the greatest return on biodiversity protection and ecosystem services sustainability. Students gain knowledge of the theories, techniques through practical experiences in planning activities, and institutional legalities of environmental and conservation planning. Using sustainability as a framework, this course presents the underlying concepts of sustainable land-use planning to best manage for abiotic and biotic resources. Focus is on the regional, local, and landscape scales. 3 hours lecture. (020744)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 436 Sustainable Transportation Planning **3 Units**
Prerequisite: GEOG 320, or faculty permission.
Typically Offered: Fall only odd years
An analysis of the function and distribution of the various modes of transportation and their role in urban and regional sustainable development. Techniques of sustainable planning transportation systems based on land use. 3 hours discussion. (003955)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 438 Urban Geography **3 Units**
Prerequisite: GEOG 102, GEOG 105, GEOG 106 or SOSC 301.
Typically Offered: Spring only
Examines the location, evolution, shape, spatial patterns, and classification of cities in the United States and elsewhere. Studies the evolution of urban systems and the spatial organization of neighborhoods, central business districts, and suburbs. Explores environmental, economic, and social issues associated with urbanization, and the policies used to address them. Examines the roles of class, race, ethnic diversity, gender, and consumption in shaping the experience of urban life. 3 hours lecture. (021163)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 439W American Cultural Landscapes (W) **3 Units W**
Typically Offered: Fall only
American Cultural Landscapes are wonderfully complex mélanges of diverse materials, technologies and ideas. Students explore the historical evolution of cultural landscapes through maps, reading, photography, field observations, and class discussion. Students develop their observational skills and learn how enjoyable and meaningful looking at landscapes can be. 3 hours discussion. (003890)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Writing Course

GEOG 440 Environmental Thought in Action **3 Units**
Typically Offered: Spring only
This seminar is required of students minoring in Environmental Studies and is to be taken as the culminating course in the minor. The course integrates the cross-disciplinary elements of the minor, emphasizing the interplay among the scientific, social, legal, historical, and humanistic elements of the study of the environment. 3 hours seminar. (009080)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 444 Biogeography and Landscape Ecology **3 Units**
Prerequisite: GEOG 101, GEOG 211, GEOG 343, GEOG 390W or equivalents. Recommended: BIOL 161, BIOL 350W, GEOG 315.
Typically Offered: Inquire at department
Biogeography and landscape ecology are keys for evaluating plant and animal distributions at local to global spatial scales. This course seeks to understand the physical and biological processes that determine these patterns through time, as well as help design management strategies for conserving our planet's biological diversity, and thus ecosystem services. The course emphasizes nature and impact of continuity and patchiness of species distributions and movement, and material flow on the structure and dynamics of wildland, agrarian, and urbanized landscapes. This is thus a highly integrative field of inquiry, pulling on concepts, theories and data from general ecology, evolutionary biology, geology, and physical and human geography. Quantitative methods and field trips consider the biogeography of plants and animals in the local landscapes. 2 hours activity, 2 hours lecture. (003929)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 445 Pyrogeography **3 Units**
Prerequisite: GEOG 101 or equivalent.
Typically Offered: Spring only
Pyrogeography is a comprehensive study of the physical and cultural parameters of fire. Topics covered include the spatial and temporal relationships of fire as an integral landscape process with an emphasis on the maintenance of North American ecosystems; the interpretation of the cultural uses of fire by indigenous communities as well as the historic and contemporary implications of fire management and policies; and the ecological implications of fire on biotic and abiotic systems. 3 hours discussion. (020415)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course

GEOG 489 Geography Internship **1-3 Units**
Typically Offered: Fall and spring
This course is an internship offered for 1.0-3.0 units. You must register directly with a supervising faculty member. Supervised work experience in applied geography or planning in public or quasi-public agencies. 9 hours supervision. (003992)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division

GEOG 498 Special Topics **1-3 Units**
Prerequisite: Completion of 6 units of geography.
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours supervision. (004004)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

GEOG 499 Special Problems **1-3 Units**
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 9 hours supervision. (004005)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

GEOG 499H Honors Research in Geography **3 Units**
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
An intensive 3-unit course in geographical research. See department office for details. Open only to students with at least a 3.0 GPA in the major. The course consists of a research project done under the supervision of a faculty member, a formal written paper, and a public presentation. 9 hours supervision. (004006)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

GEOG 506 Community Service Practice in Sustainability **3 Units**
Typically Offered: Fall only
Management of socio-economic and cultural spatial resources in the human-built environment. Effective programs and the institutional frameworks in which they occur. An analysis of the complex interactions between institutions, socio-economic structure, and cultural landscape in the management and planning process. Includes the use of maps and other graphic material, field surveys, as well as reading, lecture, and discussion. Community service work with the City of Chico and other similar municipal agencies or civil sector organizations provide a focus for class projects and discussion. 3 hours lecture. (021451)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 598 Special Topics **1-3 Units**
Prerequisite: Department permission.
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 0 hours supervision. (020162)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

GEOG 599 Special Problems **1-3 Units**
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 9 hours supervision. (020187)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

GEOG 689 Geography Internship **1-3 Units**
Prerequisite: Graduate Coordinator permission.
Typically Offered: Fall and spring
This course is an internship offered for 1.0-3.0 units. You must register directly with a supervising faculty member. Supervised work experience. 9 hours supervision. (004057)
Grade Basis: Graduate Graded
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Graduate Division

GEOG 689T Supervised College Teaching **2 Units**
Typically Offered: Fall and spring
Weekly tutorials and supervision for those students who plan to prepare themselves for a career in college teaching of geography. Students must identify the course and the tenure/tenure-track faculty member teaching that course during the semester offered. The faculty member must agree to mentor a student in pedagogical training with a particular course. Faculty members can be responsible for a maximum of two students in any one semester. A maximum of 2.0 units in this course is acceptable for credit toward the Master of Arts in Geography. The course may be taken twice, but a different subject course must be chosen for the second enrollment. A supervised teaching plan is to be filed with the Graduate Coordinator, and approval of the Department Chair is required for registration. 6 hours supervision. (020443)
Grade Basis: Graduate Graded
Repeatability: You may take this course for a maximum of 4 units
Course Attributes: Graduate Division

GEOG 697 Independent Study **1-3 Units**
Prerequisite: Graduate Coordinator permission.
Typically Offered: Fall and spring
This course is a graduate-level independent study offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 3 hours supervision. (004060)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

GEOG 699P Master's Project **1-6 Units**
Prerequisite: Graduate Coordinator permission and candidacy status.
Typically Offered: Fall and spring
This course is offered for 1.0-6.0 units. You must register directly with a supervising faculty member. 9 hours supervision. (004064)
Grade Basis: Report in Progress: CR/NC
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

GEOG 699T Master's Thesis **1-6 Units**
Prerequisite: Graduate Coordinator permission and candidacy status.
Typically Offered: Fall and spring
This course is offered for 1.0-6.0 units. You must register directly with a supervising faculty member. 9 hours supervision. (004061)
Grade Basis: Report in Progress: CR/NC
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

Geography and Environmental Studies Department

The Faculty

Owen W Bettis 2012
Lecturer
Bachelor of Arts CSU-Chico

Scott A Brady 2000
Professor
Doctor of Philosophy Louisiana St Univ & Agrl & Mec

Dean H Fairbanks 2003
Professor
Doctor of Philosophy University of Pretoria (Pretoria, South Africa)

Don L Hankins 2005
Professor
Doctor of Philosophy Univ Of Cal-Davis

LaDona G Knigge 2006
Chair
Doctor of Philosophy Other US Institution

Naomi W Lazarus 2017
Associate Professor
Doctor of Philosophy Univ Of Connecticut

Noriyuki Sato 2007
Associate Professor
Doctor of Philosophy Indiana Univ Bloomington

Mark L Stemen 1996
Professor
Doctor of Philosophy Univ Of Iowa

Emeritus Faculty

Jacquelyn R Chase
Emeritus
Doctor of Philosophy Univ Of Cal-Los Angeles

Richard L Haiman 1974
Emeritus
Doctor of Philosophy Univ Of Cal-Los Angeles

Guy Q King
Emeritus
Doctor of Philosophy Univ Of Utah

Susan E Place
Emeritus
Doctor of Philosophy Univ Of Cal-Los Angeles

Eugenie L Rovai
Emeritus
Doctor of Philosophy Clark Univ

Jerry R Williams 1969
Emeritus
Doctor of Philosophy Univ Of Florida