

GEOGRAPHY (GEOG)

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. 3 hours lecture. (003857)

General Education: Physical Science (5A)

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 3 units

Course Attributes: Lower Division; Sustainable Course

GEOG 101L Earth Systems and Physical Geography Lab 🌿 1 Unit GE

Prerequisite: GEOG 101 (may be taken concurrently). Recommended:

High school biology, chemistry, or physics.

Typically Offered: Spring, summer, fall

This physical geography lab complements the content taught in the corresponding lecture section through activities focusing on experiments and observations of the Earth-atmosphere processes which shape unique environments where we reside. For each activity, students state a hypothesis, conduct hands-on exercises, or watch faculty-guided videos to collect data and interpret results, according to the scientific method. Students also learn different methods to summarize scientific data in tabular and graphical formats. 2 hours activity. (022691)

General Education: Laboratory (5C)

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 1 unit

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 and Behavioral Sciences (4)

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 3 units

Course Attributes: Lower Division; Global Cultures Course

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 and Behavioral Sciences (4)

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 3 units

Course Attributes: Lower Division; Sustainable Course; US Diversity Course

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 and Behavioral Sciences (4)

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 3 units

Course Attributes: Lower Division; US Diversity Course

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 (3A)**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 English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4); 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 Course; Writing Course**GEOG 303 Geography and World Affairs****3 Units GC, GE**

Prerequisite: GE English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4);

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 Course**GEOG 304 Sustainability and Resilience****3 Units GE**

Prerequisite: GE English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4); Sustainability and Resilience 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 English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4); 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 Cartography and Geovisualization 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: EARTH 102, GEOG 101, PSSC 101, or PSSC 250; AGES 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: EARTH 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 English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4); 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 Course

GEOG 357 Lands and Peoples of Latin America 3 Units GC, GE

Prerequisite: GE English Composition (1A), GE Critical Thinking (1B), GE Oral Communication (1C), GE Mathematical Concepts/Quantitative Reasoning (2); or faculty permission.

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 Behavioral Sciences (UD4); 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 Course

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 English Composition (1A); 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 Requirement Course

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