

FR 499 INTERNSHIP (1-4)

Students in the internship program apply skills and methods mastered in their course work in French in a variety of situations in public and private agencies. Credit is awarded for completion of 3 hours of work (weekly average) per unit, participation in a seminar or conferences, and a final report. Placement must be arranged in advance with department coordinator. May be repeated once for credit.

Geography (GEOG)

GEOG 201 GLOBAL ENVIRONMENTAL SYSTEMS (4)

This course presents a broad survey of how the earth works. It focuses on the processes within, and the relationships between, the four global sub-systems: the atmosphere, biosphere, hydrosphere, and lithosphere. The course examines how physical, chemical, and biological functions create local, regional, and global climate and landscape patterns. It also explores the links between human activities and changes in climate, vegetation patterns, and landform processes. The course includes weekly two-hour lab sessions in which students participate in field-based data collection exercises and conduct scientific analyses. Satisfies GE Area B1 (Physical Science).

GEOG 202 WORLD REGIONAL GEOGRAPHY (3)

This course explores 4-5 world regions from a holistic perspective, examining their economic, political, demographic, cultural, and environmental landscapes with considerable historic depth. The course also considers how each region fits within a larger global political and economic system, and how their roles have changed, particularly with globalization. Satisfies GE Area D5 (Contemporary International Perspectives).

GEOG 203 HUMAN GEOGRAPHY (3)

The course introduces students to a spatial perspective of cultural, economic, political, demographic, and environmental processes. We review the deep historical origins of many social processes and examine how they continue to influence our contemporary experience. We also study how these processes change as they move across geographic space and encounter other cultures and places. Satisfies GE Area D2 (World History and Civilization).

GEOG 302 WORLD REGIONS IN GLOBAL CONTEXT (4)

Selected regions of the world form the basis of study. Economic development, political problems, man-land relationships, and global issues are covered. The course uses geographical methodologies and concepts and is interdisciplinary in its observations of world regions. Satisfies GE Area D5 (Contemporary International Perspectives).

GEOG 312 GEOGRAPHIC CONFERENCES (1-2)

Students attend a professional meeting in the Western Region, including but not limited to CGS, APCG, and AAG meetings. Students participate in at least one day of professionally-led field trips organized through the conference and one day of scholarly presentations. A fee will be charged for this course. Course may be repeated for credit. Up to 2 units of GEOG 312 in total may be counted towards the major.

GEOG 314 FIELD EXPERIENCE (1-2)

Field experience is provided in a variety of topical areas. The course titles and contents will vary and may be repeated for credit. Please see the current Schedule of Classes for the particular topic offered. A fee will be charged for this course. Up to 2 units of GEOG 314 in total may be counted toward the major.

GEOG 314D FIELD EXPERIENCE ABROAD (2-3)

Field Experience outside the United States (2-3). Cultural and physical studies of people and places through travel, observation and interaction, and oral and written analysis. Destinations include Central and south American countries. Course contents and locations will vary; may be repeated for credit. Check with instructor regarding destination and cost. Offered during Intersession or Summer Session. Prerequisite: consent of the instructor.

GEOG 315 FIELD METHODS IN GEOGRAPHY (2)

This course provides hands-on experience with field sampling techniques commonly used in biophysical data collection and spatial inquiry. Course topics include sample design, field measurements, statistical data analysis, report writing, and the use of field equipment. Field work will be conducted mainly in the Fairfield Osborn Preserve and surrounding area. Data collected from vegetation sampling, soil descriptions, microclimate measurements, and geomorphologic observations will be used to interpret the natural and anthropogenic landscape. Throughout the course, students will work with Global Positioning System (GPS) units to accurately locate their field samples on the Earth, allowing for subsequent spatial analysis within a Geographic Information System (GIS). Prerequisites: Math 165 and GEOG 205, no exception but can be taken concurrently. Laboratory fee may be charged; see current Schedule of Classes.

GEOG 316 GEOGRAPHIC INQUIRY (1)

This field based course is meant to help seniors prepare for original research associated with the Senior Seminar the following semester. Through field practice students learn how to formulate research hypotheses and/or questions. The course meets six times. Four meetings are four hours in duration and involve off-campus exercises.

GEOG 317 LAB METHODS IN PHYSICAL GEOGRAPHY (2-3)

This course provides hands-on experience with laboratory analysis techniques commonly used in physical geography. Topics include stratigraphic and laboratory analyses, report writing, and data presentation. Data collected from sediment profiles will be used to interpret environmental conditions. Students will follow laboratory methods, protocols, and use analytical equipment

GEOG 320 GEOPOLITICS (4)

In this course we dig deep into the field of geopolitics, the struggle for control over territory, transportation corridors, and natural resources. We analyze the origin of the discipline, its historical development, and key contemporary issues, including the Iraq War, the U.S. missile defense shield and the expansion of NATO, the promotion of democracy as a security strategy, Iranian nuclear ambitions, and Chinese military expansion. We will also examine the upsurge of nationalism since the end of the Cold War, and examine ethno-national rebellion from multiple perspectives, including the failure of nation-building, the failure of economic development, and competition over scarce natural resources.

GEOG 322 LIBERATION ECOLOGIES: GLOBALIZATION, ENVIRONMENTAL, AND SOCIAL MOVEMENTS (4)

This course examines some of the ways specific places and people have promoted, encountered, and negotiated the projects of development and globalization. We begin with a critical examination of development and globalization and a public narrative that has obscured their origins, intentions, and operations. We will use case studies of specific places where development and globalization have motivated resistance, often leading to new identity-based social movements. We will examine cases related to environmental degradation, land dispossession, gender and justice, and personal and community security. The course has a global perspective which includes, but is not limited to, cases from the Third World. The class often enlists political ecology and political economy perspectives in our analysis.

GEOG 330 HISTORICAL GEOGRAPHY OF NORTH AMERICA (4)

A study of the settlement history of North America and of the changing concepts of man-environment relationships in the chronology of the Europeanization of the American landscape. Investigations into where and why people settled as they did, and the origins of the economic and spatial relationships that constitute the present American scene will be the focus of the course.

GEOG 335 GLOBAL FOOD SYSTEMS: SCARCITY AND SUSTAINABILITY (4)

This course explores the development of agriculture from its origins to its modern forms. It discusses the historical development and current structure of five agricultural systems: small and large corporate farms in the development of the world, as well as traditional peasant production systems, plantations, and green revolution forms in the developing world. It then considers issues such as world hunger, food aid, global commodity trade, and the affect of biotechnology in both the developed and developing world.

GEOG 338 SOCIAL GEOGRAPHY (3)

Studies aspects of demography, migration, and the spatial dimension of social organization. Included in the course are the spatial perspectives of social well-being, poverty, crime, and ethnicity. The spatial structure of human settlement, as well as political, religious, and social values will be discussed. Satisfies upper-division GE Area E (Integrated Person).

GEOG 340 CONSERVATION OF NATURAL RESOURCES (4)

This class explores the use and management of natural resources. Each year, it focuses on a different set of renewable and non-renewable resources, such as water, oil, diamonds, rangeland, and others. It addresses topics such as distribution, scarcity, substitution, access and use-rights, resource cartels, regulation, and sustainability. It also looks at how these issues are changing under globalization and the rise of transnational corporations.

GEOG 350 URBAN GEOGRAPHY (4)

A consideration of urban origins, the diffusion of the city, and modern-day inter- and intracity phenomena. Topics to be discussed include urbanization, comparative urban forms, urban functional organization, land use, distribution of cities and their territories, and urban problems - pollution, housing, and open space.

GEOG 352 CLIMATE CHANGE AND SOCIETY (4)

This course briefly reviews climate change mechanisms and models. It then turns to its main topics: attempts and failures to mitigate greenhouse gas production, specific predicted challenges, and current and future attempts to adapt to the environmental and social impacts related to changing climates. The course compliments GEOG 372.

GEOG 360 GEOMORPHOLOGY (4)

Lecture, 3 hours; laboratory, 3 hours. Explores the relationships between surface processes such as weathering, mass movements, running water, wind, waves, and glacial ice, and the landforms these processes create. The course looks at geomorphic systems and the role of tectonics and climate in changing the balance of these systems. Actual research projects are presented to demonstrate geomorphic approaches to environmental questions. Students are exposed to research methods in the field and lab. Field trips and field reports, use of maps, and hands-on labs are included. A fee will be charged for this course. Prerequisites: GEOG 204, GEOL 102, or consent of instructor.

GEOG 365 BIOGEOGRAPHY AND LANDSCAPE ECOLOGY (4)

Biogeography is the study of 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. This is thus a highly integrative field of inquiry, pulling on concepts, theories, and data from general ecology, landscape ecology, evolutionary biology, geology, and physical and human geography. Field trips consider the biogeography of plants and animals in the local anthropogenic landscape. Prerequisite: BIOL 115, 121, 122, or consent of instructor.

GEOG 370 WEATHER AND CLIMATE (4)

An exploration of the atmosphere, how it differs from place to place and time to time. The role of radiation, temperature, humidity, evaporation, cloudiness, precipitation, and surface factors (topography, exposure and altitude) in differentiating world climates. Climate's influence on man physically and culturally, in history and prehistory. Climate change, drought and flood, and solar radiation are among the topics investigated in detail. Prerequisite: GEOG 204 or consent of instructor.

GEOG 372 GLOBAL CLIMATE CHANGE: PAST, PRESENT, AND FUTURE (4)

An advanced course focusing on evidence of climate change in the past and potential climate change in the future. Present research methods used to investigate past climate and project possible climatic trends will be studied. The range of theories regarding past, present, and future climate, and the response of the environment to such changes will be explored in detail. Prerequisites: GEOG 201 or GEOG 204 or ENSP 303 and juniors, seniors, or graduate students only.

GEOG 375 NATURAL HAZARDS (3-4)

This course examines natural hazards in relation to human populations and activities around the world. It focuses on disasters generated by weather, climate, and geomorphic processes (such as hurricanes, landslides, tsunamis, and earthquakes) as well as global climate change. It considers risk assessment, hazard perception, population change, and impact on the built environment. Prerequisite: GEOG 201 or consent of instructor.

GEOG 380 ENVIRONMENTAL REMOTE SENSING (4)

Environmental remote sensing uses imagery from satellite and airborne sensors to map properties of the Earth over broad spatial scales. This course develops an understanding of physical principles behind remote sensing, explores a range of sensors, spatial scales, and locations, and uses image processing techniques for extracting useful environmental information.

GEOG 385 CARTOGRAPHIC VISUALIZATION (3-4)

Lecture, 2 hours; laboratory, 3 hours. Map and graphic methods in geography: history, design, theory, and construction. Topics include selection of map projections, use of scales, generalization, data input and processing, color, visualization of spatial data, and map production. Emphasis is placed on effective communication through graphic design. Covers the increasing role of geographic information systems (GIS) in cartography. Also examines the collection of geographic data, such as with global positioning systems (GPS). Exercises guide students through increasingly complex methods of data collection and cartographic construction. Prerequisite: GEOG 205, no exception but can be taken concurrently. Laboratory fee may be charged; see current Schedule of Classes.

GEOG 387 GEOGRAPHIC INFORMATION SYSTEMS (4)

Geographic information system (GIS) technologies provide researchers and policy-makers with a powerful analytical framework for making decisions and predictions. As with any technology, the appropriate use of GIS depends greatly on the knowledge and skills of the user. This course addresses the scientific and technical aspects of working with geographical data, so that GIS users understand the general principles, opportunities, and pitfalls of recording, collecting, storing, retrieving, analyzing, and presenting spatial information. Both fundamental concepts and "hands on" experience with state-of-the-art software are incorporated through readings, lecture discussion, and laboratory assignments. The first half of the course focuses on the "nuts and bolts" of how a GIS works, while the second half concentrates on methods for spatial analysis and modeling. Prerequisite: CS101 or basic competency with Microsoft operating system and Office applications. Laboratory fee may be charged; see current Schedule of Classes.

GEOG 390 GEOGRAPHY OF CALIFORNIA (3)

California as a state and as a region is in many ways unique. This course examines both the singular physical and human aspects of the State, from its unusual geologic history, climate, and vegetation, through its earliest inhabitants, to its present day diverse population, and trend-setting economic, political, and cultural atmosphere. Issues discussed include changing populations and regional differences, evolving urban areas, water resources, agriculture, and forestry.

GEOG 392 LATIN AMERICA AND THE CARIBBEAN (4)

From an environmental history perspective, the class begins with an investigation of pre-Columbian and post-contact social ecologies. This leads to analysis of more contemporary processes such as rural modernization, the rapid growth of cities and migration, the role of identity and women, and the dynamics of free-trade globalization and international relations.

GEOG 393 SOUTH ASIA (4)

This course covers four broad topics in South Asia: (1) geopolitics, including foreign policy objectives of key states in the region, and competition for oil and gas; (2) the prospects for democracy in the region, with attention to Maoist rebellions in Nepal and India, tribal unrest and Islamist politics in Afghanistan and Pakistan, Hindu nationalism in India, the civil war in Sri Lanka, and the prospects for democratic reform in post-conflict Nepal; (3) economic development and stagnation, including the success of the high tech sector and the continuing poverty of agricultural and industry laborers; and (4) human-environment relations, including land degradation, water shortage, and environmental protest movements.

GEOG 394 AFRICA SOUTH OF THE SAHARA (4)

Students explore various historical and contemporary processes that have created Africa's diverse and complex geography. The course begins with a historical survey of the continent, starting with its great civilizations and continuing through its experiences through colonialism, independence, the cold war, and globalization. This section of the class examines how these major events have played out throughout the different regions of Africa, south of the Sahara. The class then turns directly to thematic issues that are central to a human-geographic perspective of the continent: population, rural/urban dynamics, education and health issues, and human-environment interactions including agricultural systems and conservation issues. Finally, with a deeper understanding of the region, the course addresses present-day political hot spots of post-cold war Africa, and the critical development problems plaguing the continent.

GEOG 396 SPECIAL TOPICS IN AREA STUDIES (4)

This course will cover regions not regularly taught in the department. Regions may include areas such as The Middle East, East Asia, Southeast Asia, Arid lands, The Pacific Rim/World or underdeveloped lands. Offerings will vary depending on visiting faculty, experimental courses, and educational needs.

GEOG 460 LAB ASSISTANT IN GEOGRAPHY (2)

Open only to advanced students who have been invited by the faculty member to serve as a Lab Assistant for GEOG 201 Global Environmental Systems. Intended to give students experience in assisting the instructor in the laboratory. Three units may be counted towards the Geography major. Prerequisite: consent of instructor. May be repeated once for credit.

GEOG 483 ENVIRONMENTAL GIS (3-4)

Geographic Information Systems (GIS) are well-suited for describing, analyzing, and modeling environmental problems from a spatial and temporal perspective, and they are widely used for research, impact assessment, planning, and management. This course will investigate a range of environmental problems with lectures and quantitative data analysis in ArcGIS laboratory modules. Prerequisite: GEOG 387.

GEOG 487 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (3)

This course provides greater depth in the foundations of geographic information systems (GIS). Readings, group discussions, and lectures delve into database development issues, advanced spatial analysis, and GIS research applications. Students also complete a semester-long research project using GIS technologies. Students learn to identify problems that can benefit from a spatial-analytical approach and determine the appropriate data for pursuing such a project. Students build their own GIS database, mastering skills such as digitizing and attributing spatial data, importing data from the internet, collecting field data for GIS integration, and converting GIS layers into a single coordinate system and map projection. Finally, students learn to choose and implement the most appropriate spatial analysis method for their research, and then interpret the results. Prerequisite: GEOG 387 with a grade of B or better or consent of instructor.

GEOG 490 SENIOR SEMINAR (3-4)

The focus of the seminar may vary, but the class will expose students to the nature of the discipline of geography through readings of scholarly literature. The class will emphasize a student research project and will include classroom discussions during the course of the semester.

GEOG 495 SPECIAL STUDIES (1-4)

Special studies may be arranged to cover an area of interest not covered in the courses otherwise offered by the department. Prerequisites: completed special studies form and consent of the instructor.

GEOG 496 SELECTED TOPICS IN GEOGRAPHY (2-5)

A single subject or set of related subjects not ordinarily covered by the geography department. Offerings will vary depending on visiting faculty, experimental courses, and educational needs.

GEOG 499A GEOGRAPHY INTERNSHIP PROGRAM (2-5)

Students in the internship program will be given the opportunity to gain practical experience using geographical skills by working in a variety of county and city agencies in the Sonoma State University service area. Credit is given for three hours per unit work per week as arranged with the internship coordinator. Must have junior- or senior-level standing and a minimum GPA of 2.75, or permission from the Department Chair. GEOG 499A is offered in Fall; GEOG 499B is offered in Spring. May be repeated once for credit.

GEOG 499B GEOGRAPHY INTERNSHIP PROGRAM (2-5)

Students in the internship program will be given the opportunity to gain practical experience using geographical skills by working in a variety of county and city agencies in the Sonoma State University service area. Credit is given for three hours per unit work per week as arranged with the internship coordinator. Must have junior- or senior-level standing and a minimum GPA of 2.75, or permission from the Department Chair. GEOG 499A is offered in Fall; GEOG 499B is offered in Spring. May be repeated once for credit.

GEOG 595 GRADUATE SPECIAL STUDIES (1-6)

Advanced research and writing. Students work under close supervision of faculty members. Subject matter variable. May be repeated for credit. Prerequisites: consent of instructor and completed special studies form.