

GEOGRAPHY

The Geography Department offers theoretical and applied work in human geography, environment and society geography, physical geography, and geographic information science. Each subfield covers a broad range of topics. Human geography includes political, cultural, development, feminist, population, and urban geography. Environment and society geography includes political ecology, natural hazards, and conservation practice. Physical geography includes climatology, geomorphology, hydrology, and biogeography. Geographic information science includes spatial analysis using GIS, remote sensing, and cartography. The Department also offers regionally focused courses on mountain geography and geographies of China, Latin America, Africa, Middle East and South Asia. To complement its curriculum, the Department also offers internship opportunities for geography majors.

Students wishing to pursue graduate work in geography leading to candidacy for advanced degrees should read carefully the requirements for advanced degrees in the Graduate School section. Additional information should be obtained from the Department of Geography.

The course code for this program is GEOG.

Master's Degree

- Geography - Master of Arts (MA) (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/geography/geography-master-arts-ma/>)

Doctoral Degree

- Geography - Doctor of Philosophy (PhD) (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/geography/geography-doctor-philosophy-phd/>)

Certificates

- Development Studies - Graduate Certificate (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/geography/development-studies-graduate-certificate/>)
- Hydrologic Sciences - Graduate Certificate (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/geological-sciences/hydrologic-sciences-graduate-certificate/>)
- Population Studies - Graduate Certificate (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/geography/population-studies-graduate-certificate/>)

Interdisciplinary Program

- Earth Data Analytics - Foundations - Graduate Certificate (<https://catalog.colorado.edu/graduate/colleges-schools/interdisciplinary-programs/earth-data-analytics-foundations-graduate-certificate/>)

Faculty

While many faculty teach both undergraduate and graduate students, some instruct students at the undergraduate level only. For more information, contact the faculty member's home department.

Abdalati, Waleed (https://experts.colorado.edu/display/fisid_145800/)
Professor; PhD, University of Colorado Boulder

Balch, Jennifer Kakareka (https://experts.colorado.edu/display/fisid_154464/)

Associate Professor; PhD, Yale University

Barnard, Holly Rene (https://experts.colorado.edu/display/fisid_147417/)
Associate Professor, Associate Chair; PhD, Oregon State University

Blanken, Peter David (https://experts.colorado.edu/display/fisid_114026/)

Professor; PhD, University of British Columbia (Canada)

Boykoff, Maxwell Thomas (https://experts.colorado.edu/display/fisid_147562/)

Associate Professor Adjunct; PhD, University of California, Santa Cruz

Bruckner, Heide (https://experts.colorado.edu/display/fisid_166056/)
Instructor; PhD, University of Graz

Bryan, Joseph Henry (https://experts.colorado.edu/display/fisid_145802/)

Associate Chair, Associate Professor; PhD, University of California, Berkeley

Buttenfield, Barbara P. (https://experts.colorado.edu/display/fisid_107860/)

Professor Emerita; PhD, University of Washington

Caine, T. Nelson (https://experts.colorado.edu/display/fisid_104285/)
Professor Emeritus

Cao, Guofeng (https://experts.colorado.edu/display/fisid_167522/)
Assistant Professor; PhD, University of California Santa Barbara

Carroll, Clinton R. (https://experts.colorado.edu/display/fisid_154726/)
Assistant Professor Adjunct; PhD, University of California, Berkeley

Diaz, Melisa (https://experts.colorado.edu/display/fisid_168628/)
Assistant Professor; Ph.D., The Ohio State University

Fluri, Jennifer L. (https://experts.colorado.edu/display/fisid_154033/)
Chair, Professor; PhD, Pennsylvania State University

Foote, Kenneth E.
Professor Emeritus

Goldman, Mara Jill (https://experts.colorado.edu/display/fisid_143542/)
Associate Professor; PhD, University of Wisconsin–Madison

Harrison, Jill Lindsey (https://experts.colorado.edu/display/fisid_149614/)
Associate Professor; PhD, University of California, Santa Cruz

Isaacs, Rachel (https://experts.colorado.edu/display/fisid_164240/)
Instructor; PhD, Pennsylvania State University

Karimzadeh, Morteza (https://experts.colorado.edu/display/fisid_166081/)
Assistant Professor; PhD, Pennsylvania State University

Kelly, Sarah (https://experts.colorado.edu/display/fisid_159679/)
Instructor; MA, University of South Florida

Leyk, Stefan (https://experts.colorado.edu/display/fisid_145192/)
Professor, Associate Chair; PhD, University of Zurich (Switzerland)

Lining, Katherine (https://experts.colorado.edu/display/fisid_163643/)
Assistant Professor; PhD, Colorado State University

Mohan, Taneesha
Teaching Assistant Professor; Ph.D., London School of Economics and Political Science

Molotch, Noah Paul (https://experts.colorado.edu/display/fisid_139374/)
Associate Professor; PhD, University of Arizona

Musselman, N. Keith (https://experts.colorado.edu/display/fisid_151215/)
Assistant Professor; Ph.D, University of California- Los Angeles

O'Loughlin, John (https://experts.colorado.edu/display/fisid_101339/)
Professor; PhD, Pennsylvania State University

Oakes, Tim (https://experts.colorado.edu/display/fisid_109269/)
Professor; PhD, University of Washington

Pitlick, John
Professor Emeritus

Reid, Colleen (https://experts.colorado.edu/display/fisid_157951/)
Assistant Professor; PhD, University of California, Berkeley

Riosmena, Fernando (https://experts.colorado.edu/display/fisid_144419/)
Associate Professor; PhD, University of Pennsylvania

Rogers, Andrei
Professor Emeritus

Schoennagel, Tania (https://experts.colorado.edu/display/fisid_139625/)
Assistant Professor Adjunct

Serreze, Mark (https://experts.colorado.edu/display/fisid_106334/)
Distinguished Professor; PhD, University of Colorado Boulder

Spielman, Seth Edward (https://experts.colorado.edu/display/fisid_148271/)
Associate Professor; PhD, SUNY at Buffalo

Travis, William R. (https://experts.colorado.edu/display/fisid_101777/)
Associate Professor; PhD, Clark University

Truelove, Yaffa Elane (https://experts.colorado.edu/display/fisid_159271/)
Assistant Professor; PhD, University of Cambridge (England)

Veblen, Thomas T. (https://experts.colorado.edu/display/fisid_105842/)
Distinguished Professor Emeritus; PhD, University of California, Berkeley

Williams, Mark W. (https://experts.colorado.edu/display/fisid_105438/)
Professor Emeritus

Yeh, Emily Ting (https://experts.colorado.edu/display/fisid_130119/)
Professor; PhD, University of California, Berkeley

Courses

GEOG 5003 (4) Elements of Geographic Information Systems

Discusses incorporating GIS methods into graduate thesis or dissertation research. Reviews basic mapping concepts (scale and projections), acquiring different types of spatial data (raster and vector), building an error-free database, making simple queries, overlays, charts, and maps. Intended for students who want to learn GIS but lack background skills in computing or cartography.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite some experience with Mac or Windows.

Additional Information: Departmental Category: GIScience

GEOG 5023 (4) Advanced Quantitative Methods for Spatial Data

Reviews fundamental statistical and quantitative modeling techniques and introduces more advanced statistical techniques widely used in geography today. Emphasizes geographic examples and spatial problems teaching hands-on skills in statistical programming. Topics covered include generalized linear models, spatial autocorrelation, spatial regression methods, and working with complex datasets.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4023

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Methods

GEOG 5043 (4) Advanced Geovisualization and Web Mapping

Advanced technical course in web-based cartography and geovisualization stressing the important role digital cartography plays in cyberspace and society. Focuses on principles of effective cartographic design in multimedia and hypertext environments. Labs are organized around hands-on active learning projects demonstrating skills in geovisualization and cartographic practice.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4043

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Methods

GEOG 5093 (4) Remote Sensing of the Environment

Covers acquisition and interpretation of environmental data by remote sensing. Discusses theory and sensors as well as manual and computerized interpretation methods. Stresses infrared and microwave portions of the spectrum.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4093 and GEOL 4093 and GEOL 5093

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Methods

GEOG 5100 (1-4) Special Topics: Geography

Covers various topics outside of the normal curriculum; offered intermittently depending on student demand and availability of faculty. **Repeatable:** Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

GEOG 5103 (4) Geographic Information Science: Spatial Analytics

Explores advanced topics in geospatial databases, spatial analytics and geoprocessing in a Geographic Information System (GIS). Emphasizes how geographic concepts are linked to methodological frameworks for recording, transforming, storing/retrieving, analyzing, and processing geographic data as well as various forms of uncertainty. Exercises demonstrate the application of GIS-based methods to real world scenarios in interdisciplinary settings.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4103

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: GIScience

GEOG 5113 (3) Seminar: Geographic Information Systems

Focuses on the current research topics in geographical information systems and selected areas of application. Includes major journal articles related to each topic. Students complete and present a seminar paper.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite GEOG 4103 or GEOG 5103 or instructor consent required.

Additional Information: Departmental Category: GIScience

GEOG 5152 (3) History and Theory of Geography

History of ideas and institutions that have shaped contemporary geographic inquiry. Examines the evolving relations among human geography, physical geography, environment-society relations, and geographic information processing. Designed to situate graduate student research within major subfields and intellectual currents of geography.

Requisites: Restricted to Geography (GEOG) graduate students only.

GEOG 5161 (3) Research Design in Geography

The human section reads and discusses contemporary research philosophies and methodologies in human geography. Practices the development of research proposals and presentation of research ideas and results. The physical section reads and discusses contemporary research philosophies and methodologies in physical geography (climatology, geomorphology, biogeography, and soils geography). Practices the development of research proposals and presentation of research ideas.

Requisites: Restricted to Geography (GEOG) graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5203 (4) Geographic Information Science: Spatial Modeling

Focuses on the use and development of advanced models for human and environmental applications in a geospatial environment integrating raster and vector data models. Covers terrain and hydrologic modeling, geostatistical modeling, dasymetric modeling, as well as multi-criteria modeling. Group projects critically design, implement and test spatial models to develop independent skillsets in a chosen problem setting.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4203

Requisites: Restricted to graduate students only.

Recommended: Prerequisite GEOG 4103 or GEOG 5103 or working knowledge of GIS software or instructor consent required.

Additional Information: Departmental Category: Methods

GEOG 5211 (3) Seminar: Physical Climatology

Involves a research seminar concerned with problems of mass and energy exchange in the Earth-atmosphere system. Selects topics from such areas as air quality, bioclimatology, hydrology, climate change, and the climates of urban, agricultural, and natural environments.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5221 (3) Synoptic and Dynamic Climatology

Examines global climates from the standpoint of synoptic and dynamic climatology.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5241 (1-3) Topics in Physical Geography

Presents recent research topics that vary from year to year. Consult the online Schedule Planner for specific topics.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5251 (4) Fluvial Geomorphology

Emphasizes landscapes formed by running water. Includes basic fluid mechanics, sediment transport, hillslope and channel erosion, and sediment yield.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4251

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5271 (3) The Arctic Climate System

Understanding the climate of the Arctic requires a synthetic, system oriented approach. The course focuses on the intimate linkages between the atmosphere, ocean and land that give the Arctic region its unique character, link the Arctic to the larger global climate system, and promote understanding the rapid changes occurring in the Arctic.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4271

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5292 (3) Migration, Immigrant Adaptation, and Development

historical and current patterns of migration with an emphasis in international movement. Looks at leading migration theories related to both origin- and destination-based explanations while critically looking at the role of development as a potential cause and consequence of population movement. Finally, covers some aspects of immigrants' social and economic adaptation to their host society.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4292

Requisites: Restricted to graduate students only.

GEOG 5303 (4) Geographic Information Science: Spatial Programming

Focuses on the extension of geographic information systems (GIS) through programming as well as on the development of algorithms for spatial analysis and information extraction in vector and raster data using open source tools. Covers concepts, principles and techniques of programming and solving spatial problems in natural and social science settings. Group projects will foster skillsets in implementing solutions to complex spatial problems.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4303

Requisites: Restricted to graduate students only.

Recommended: Prerequisite GEOG 4203/5203.

Additional Information: Departmental Category: GIScience

GEOG 5321 (3-4) Snow Hydrology

Offers a multidisciplinary and quantitative analysis of physico-chemical processes that operate in seasonally snow-covered areas, from the micro- to global-scale: snow accumulation, metamorphism, ablation, chemical properties, biological aspects, electromagnetic properties, remote sensing, GIS and quantitative methods.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4321

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5331 (3-4) Mountain Climatology

Surveys and analyzes climatic characteristics of mountain environments worldwide.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4331

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5371 (3) Forest Geography: Principles and Dynamics

Surveys principles of forest geography and ecology. Includes both individual tree responses to environmental factors and species interactions within communities. Emphasizes forest dynamics and their relation to management problems.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4371

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5391 (3) Seminar: Biogeography

Considers in detail current research themes in biogeography. Includes intensive reading of current research literature and preparation of research papers. Topics vary.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5401 (3) Soils Geography

Discusses chemical and physical properties of soils, soil development, distributions and management relevant to understanding plant-soil relationships in natural and human-altered landscapes.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4401

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 5403 (3) Geographic Information Science: Space Time Analytics

Focuses on understanding processes (human, natural, social or physical) through data driven analysis of patterns in spatio-temporal data. Covers a wide range of topics relevant to space time data, including pattern analysis, modeling and visualization as well as time geography and various contemporary issues in space time analytics. Utilizes a hands-on, flipped classroom approach with in-class development of technical skills.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4403

Requisites: Restricted to graduate students only.

GEOG 5463 (3) Earth Analytics Data Science Bootcamp

Learn key skills to automate data processing and visualization workflows that support both repeatable analysis and collaborative project approaches using scientific programming, version control and project management tools. Covers working with heterogeneous, large spatio-temporal data derived from space, airborne and ground based sensors and other sources. Gain applied experience through group projects that address real world problems.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4463

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

GEOG 5501 (3) Water Resources and Water Management of Western United States

Interprets and analyzes hydroclimatic data, surface and groundwater. Critically evaluates water use, emphasizing problems associated with geographic maldistribution, appropriations, irrigation, industry, pollution and regional development.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4501

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Environment-Society Geography

GEOG 5503 (3) Geographic Information Science: Project Management

Managing a geospatial project encompasses problem identification, project design, analysis and supporting team dynamics. The class mixes lectures and class exercises with student-selected projects and works through all stages of a project from articulating an initial idea to project planning and scoping, building a work plan, timeline and budget, executing the work plan and evaluating a project's progress.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4503

Requisites: Requires prerequisite course of GEOG 5103 (minimum grade C-).

GEOG 5563 (3) Earth Analytics

Introduce students to major unanswered questions in Earth science and to the analytical tools, including data management, analysis and visualization, necessary to explore 'big data' from a suite of sensors. Aligns with Earth Lab, a new initiative of the University's Grand Challenge (<http://www.colorado.edu/grandchallenges/>) to use our expertise in space-based observation to address our world's most pressing problem. Comparable programming course work may be substituted for GEOG 5463 with instructor approval.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4563

Requisites: Requires prerequisite course of GEOG 5463 (min grade B-)

Restricted to graduate students only.

Grading Basis: Letter Grade

GEOG 5603 (3) GIS in the Social and Natural Sciences

Introduces Geographic Information Systems and their underlying principles through interactive lectures and lab exercises. Students get basic skills for working in a GIS environment and learn how to handle and manage geospatial data, create maps and conduct geospatial analysis focusing on project tasks typically encountered in the social and natural sciences.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4603

GEOG 5622 (3) City Life

Analyzes social, behavioral, political and demographic factors that influence development and maintenance of communities in contemporary urban environments, with primary emphasis on U.S. cities.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4622

Requisites: Restricted to graduate students only.

GEOG 5632 (3) Development Geography

Provides an overview of development policy and practice, surveying foundational works in Development Studies as well as critical interventions. Required for Graduate Certificate in Development Studies.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4632

Requisites: Restricted to graduate students only.

GEOG 5642 (3) Seminar: Urban Geography

Surveys current research topics in urban geography. Emphasizes definition of possible student thesis topics.

Requisites: Restricted to graduate students only.

GEOG 5652 (3) Introduction to Social Theory

Surveys theoretical paradigms in the social sciences. Includes canonical works from the history of the social sciences as well as contemporary theorists. Appropriate for beginning to advanced graduate students doing qualitative research.

Requisites: Restricted to graduate students only.

GEOG 5662 (3) Seminar: Topics in Economic Geography

Covers selected topics emphasizing faculty specialties. Topics vary with instructor. Check with department for semester offerings.

Repeatable: Repeatable for up to 3.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 5663 (1-3) Earth Analytics Applications

Develop expertise in finding, organizing, managing and processing large, heterogeneous, spatio-temporal data to address a real-world problem. Students will work collaboratively on semi-guided science project. Students gain critical skills required to understand data structures, utilize APIs, extract insight from data and understand how uncertainty propagates. Culminates with a formal presentation of project results.

Repeatable: Repeatable for up to 3.00 total credit hours.

Requisites: Requires prerequisite course of GEOG 5463 and GEOG 5563 (min grade B-) Restricted to graduate students only.

Grading Basis: Letter Grade

GEOG 5712 (3) Political Geography

Systematic study of relations between geography and politics, especially as background for better understanding of international affairs. Includes topics such as frontiers and boundaries, power analysis, geopolitics, international political economy, and strategic concepts.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4712

Requisites: Restricted to graduate students only.

GEOG 5722 (3) Field Methods in Human Geography

Examines research methods associated with field work in human geography. Prepares students for fieldwork by focusing on geographic and interdisciplinary field work techniques; interpretation of field data; discussion of the politics, ethics and gender, race, class and cross-cultural issues related to field work.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4722

Requisites: Restricted to graduate students only.

GEOG 5732 (3) Population Geography

Emphasizes spatial aspects of population characteristics including fertility, mortality, migration, distribution and composition. Includes both theoretical and empirical considerations, in addition to field work and computer simulations.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4732

Requisites: Restricted to graduate students only.

GEOG 5750 (3) Climate Politics and Science-Policy

Explores, understands and critically analyzes influences and trends in climate politics and science-policy. Course participants will gain an improved understanding of the myriad factors, pressures and processes that are involved in contemporary climate politics undergirding explicit policy proposals. Course participants will more capably identify consequential spaces of decision-making, recognize tractable places for change and fashion constructive strategies for their own research by way of best available evidence from work done in these areas. Overall, our attention to these course themes, concepts and case studies will help us to more capably understand, analyze and engage in the high-stakes 21st century arena of climate politics and science-policy. Previously offered as a special topics course.

Equivalent - Duplicate Degree Credit Not Granted: ENVM 5750, ENVS 5750 and SOCY 5750

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

GEOG 5782 (3) Sustainable Development: Critique

Investigates historical and contemporary theories and critiques of development and their implications for geographic theory and method. Focuses on the role of representation in evaluating case studies and examining the potential for a sustainable development.

Requisites: Restricted to graduate students only.

GEOG 5832 (3) Geography of Tibet

Rigorously examines contemporary Tibetan society, culture and nature from a geographical perspective. Uses readings on contemporary Tibet as an entry point into scholarly research about nationalism, representation, diaspora, landscape and place, sustainable development, natural resource management, identity and environmentalism.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4832

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Asia Content

GEOG 5840 (1-3) Graduate Independent Study

Offers independent research for master's students only. Instructor consent required.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

GEOG 5842 (3) Global Frontiers in Southeast Asia

Uses the theme of the global frontier to examine and compare three key moments in the modern history of Southeast Asia: the colonial encounter, the rise of the modern territorial state, and the age of contemporary globalization. Examines case studies from earlier eras to analyze emerging global frontiers at the junction of state territoriality and transnational economic expansion.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4842 and ASIA 4842

Requisites: Restricted to graduate students only.

GEOG 5852 (3) Health and Medical Geography

Examines geographical patterns of health and disease with an emphasis on global health issues. Focuses on three major approaches to medical geographic research: ecological approaches, which systematically analyze relationships between people and their environments; social approaches, including political economy and socio-behavioral approaches; and spatial approaches, which employ maps and spatial analysis to identify patterns of health and disease. Elective course for Public Health Certificate.

Equivalent - Duplicate Degree Credit Not Granted: GEOG 4852

Requisites: Restricted to graduate students only.

GEOG 5930 (3) Advanced Internship

Provides an academically supervised opportunity for graduate-level geography majors to work in public and private organizations on advanced projects related to geographic theory and their career goals. Instructor consent required.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

GEOG 5961 (3) Theories of Climate and Climate Variability

Critically reviews current theories of climatic variability based on analysis of the different physical processes affecting climate.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 6180 (1-3) Seminar: Geographic Problems

Applies research methods to selected problems. Topics vary with instructor.

Repeatable: Repeatable for up to 7.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 6211 (1-3) Readings in Climatology

Discusses selected topics in current climatological literature. Specific themes vary.

Repeatable: Repeatable for up to 7.00 total credit hours.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Physical Geography

GEOG 6402 (3) Seminar: Political Ecology

Critically examines the politics of human-environment relationships across cultures and societies. Focuses on environmental degradation, change and management from the perspectives including political economy, cultural politics, STS and post structural theory.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 6712 (3) Seminar: Political Geography

Considers in detail history and methodology of the field, including an analysis of selected systematic topics such as frontiers and boundaries, international rivers, conflicting claims to territory, and electoral geography.

Repeatable: Repeatable for up to 7.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 6732 (3) Formal Population Geography: Analysis and Forecasting

In-depth introduction to formal demography. In addition to learning the basic demographic tools used nowadays in fertility, marriage, mortality, migration and forecasting/projections, it also looks at some potential links between formal and statistical demographic work that would enable the student to apply some of the methods learnt in an econometric or multivariate setting.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite GEOG 5023.

GEOG 6742 (3) Seminar: Cultural Geography

Explores various geographic topics emphasizing the concept of culture. Emergence of several points of view in the development of cultural geography.

Repeatable: Repeatable for up to 7.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 6940 (1) Master's Candidate for Degree

Registration intended for students preparing for a thesis defense, final examination, culminating activity, or completion of degree.

Requisites: Restricted to graduate students only.

GEOG 6950 (1-6) Master's Thesis

Instructor consent required.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to graduate students only.

GEOG 7118 (3) Foundations of Environmental Justice

Examines environmental justice movements, policies, institutions, objectives, and scholarship. Identifies factors that contribute to environmental inequality, and efforts to reduce it. Formerly offered as a special topics course.

Equivalent - Duplicate Degree Credit Not Granted: COMM 7118, ENVS 7118 and PSCI 7118

Requisites: Restricted to graduate students only.

GEOG 7840 (1-3) Graduate Independent Study

Offers independent research for doctoral students only. Instructor consent required.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

GEOG 8990 (1-10) Doctoral Dissertation

All doctoral students must register for not fewer than 30 hours of dissertation credit as part of the requirements for the degree. For a detailed discussion of doctoral dissertation credit, refer to the Graduate School section. Instructor consent required.

Repeatable: Repeatable for up to 30.00 total credit hours.

Requisites: Restricted to graduate students only.