

# GEOGRAPHY

---

geography.as.miami.edu

## Dept. Code: GEG

### Introduction

Geography is the science of place and space. Geographers ask where things are located on the surface of the earth, why they are located where they are, how places differ from one another, and how people interact with the environment. There are two main branches of geography: human geography and physical geography. Human geography is concerned with the spatial aspects of human existence. Physical geographers study patterns of climates, landforms, vegetation, soils, and water. Thus, Geography links the social sciences and natural sciences.

Geographers use many tools and techniques in their work, and geographic technologies are increasingly among the most important emerging fields for understanding our complex world. They include Geographic Information Systems (GIS), Remote Sensing, Global Positioning Systems (GPS), online mapping platforms such as Google Earth, statistics, survey research, and others.

Geographers work in many different areas, such as environmental management, education, disaster response, city and county planning, community development, and more. Geography is an interdisciplinary field that offers diverse career opportunities.

The relevance and prestige of Geography as a discipline was helped enormously during the past 20 years by four key developments:

1. the emergence of "globalization" as a phenomenon requiring analysis and explanation;
2. the increasing recognition of space and place in cognate social and physical sciences;
3. deepening concern for nature-society interactions and issues of environmental sustainability, development, and climate change;
4. the development of geographic information systems (GIS and GIScience) and remote sensing technologies and their widespread adoption by organizations in both the public and private sectors.

Knowledge of GIS and Geospatial Technology can be important in the field of geography and cognate disciplines. The US Bureau of Labor Statistics has identified GIS as a top emerging field, with more than 41,000 GIS-related job postings in 2016, according to Education Advisory Board research.

### Educational Objectives

Geography offers specializations in areas such as

- Geographic Information Systems and Remote Sensing
- Medical Geography and Global Health
- Urban Geography and International urbanization
- Environmental Studies

Geography offers courses that provide training in indispensable skills for everyone entering the present-day labor market:

- Research Methodology
- Statistics
- Computer Cartography
- Geographic Information Systems (GIS)
- Remote Sensing of the Environment
- Survey Research

### Study Abroad

Majors are strongly encouraged to study abroad. Study abroad at carefully selected institutions will complement the student's curriculum and area of specialization, will enhance fluency in a foreign language, and will result in heightened affinity for a foreign culture. The study abroad experience need not result in credit overloads or extended time spent in the program.

### Writing within the Discipline

To satisfy the College of Arts and Sciences writing requirement in the discipline, students whose first major is Geography must take at least one of the following courses for a writing credit: GEG 306, GEG 346, GEG 402.

### Degree Programs

The major in Geography leads to a Bachelor of Arts Degree, or a Bachelor of Science Degree.

### Departmental Honors in Geography

The Department of Geography encourages its majors and minors to intensify and deepen their knowledge of Geography through its Departmental Honors Program. The program is designed to give our students the opportunity to explore various topics and problems in Geography that are of particular interest to them, to work more closely with faculty in the department, to develop skills in research and thesis preparation, and in some cases to prepare for graduate work in Geography or other disciplines.

Minimum requirements for the program are as follows:

1. a cumulative grade point average of at least 3.30;
2. a cumulative grade point average in Geography of at least 3.50; and
3. a thesis that is approved by departmental faculty.

Students have 3 options for writing the thesis.

1. Students may take 6 credit hours of independent study (GEG 598 (<http://bulletin.miami.edu/search/?P=GEG%20598>)) with one or more departmental faculty.
2. Students may take a 3 credit hour course offered at the 300-level or above and 3 credit hours of independent study (GEG 598 (<http://bulletin.miami.edu/search/?P=GEG%20598>)).
3. In exceptional circumstances, a student's thesis may be written as part of the requirements for earning 6 credit hours in Geography at the 300-level or above.

In all three cases, the thesis must be a single, coherent work of scholarship through which the student earns 6 credit hours in Geography over the course of two semesters.

A Geography faculty member must serve as the Honors thesis advisor, and a second reader, who may be from another department, must be selected in consultation with the thesis advisor. The thesis must be at least 30 pages in length (double spaced, 12 point font), not including tables and figures. Once the topic and committee are secured, students should turn in their signed Departmental Honors Thesis Form to the main office of the Geography Department. This form must be signed by the Director of Undergraduate Studies and submitted by October 15 for fall graduation and February 15 for Spring graduation.

In addition to completing the written thesis, students must orally present the results of their work to faculty and students at a special honors colloquium to be held at the end of the semester.

#### **GEG 101. Digital Earth. 3 Credit Hours.**

Explores various geospatial technologies and the societal implications of our digital world with particular emphasis locational services, mapping, imagery, and other capabilities.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

#### **GEG 105. World Regional Geography. 3 Credit Hours.**

An introduction to geography's basic concepts within the framework of a comprehensive survey of the world's major regions.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

#### **GEG 110. Introduction to Human Geography. 3 Credit Hours.**

An introduction to the sub-fields of human geography by an examination of patterns and process in the international system.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

#### **GEG 120. Physical Geography. 3 Credit Hours.**

The Earth system (atmosphere; hydrosphere; biosphere; lithosphere) emphasizing the interrelationships among its constituent subsystems; human-environmental interactions and geographic dimensions of these four subsystems.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 198. Geographic Information System for Engineers. 1 Credit Hour.**

The fundamentals of Geographic Information Systems (GIS). A GIS is a set of hardware and software tools that allow people to work with data that are tied to a particular location. In this course students will learn how to import, analyze and display answers to spatial research questions using GIS software. By the end of the semester students should have a solid understanding of the various applications of Geographic Information Systems in numerous spheres of everyday life. No prior experience with GIS software is required for this course. This course is for College of Engineering students only.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 199. Geographic Information Systems for Engineers. 1 Credit Hour.**

The fundamentals of Geographic Information Systems (GIS). A GIS is a set of hardware and software tools that allow people to work with data that are tied to a particular location. In this course students will learn how to import, analyze and display answers to spatial research questions using GIS software. By the end of the semester students should have a solid understanding of the various applications of Geographic Information Systems in numerous spheres of everyday life. No prior experience with GIS software is required for this course.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 201. Topics in Geography. 1-3 Credit Hours.**

Select topics in Geography. Contents varies by semester and is indicated in parenthesis following course number and title in Class Schedule.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 231. Environmental Geography. 3 Credit Hours.**

Designed to encourage students to think deeply, critically, and coherently about the interaction between human societies and nature from a geographical perspective. Explores the societal dependence on natural ecosystems. Assess the magnitude and impacts of the environmental changes caused by human activities in the biosphere and evaluates the hypothesis that the earth has moved into in a new geologic epoch. Explores the concept of sustainable development and how countries are implementing it.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 235. Wine, Environment & Society. 3 Credit Hours.**

Explores regional differences in wine production, consumption, economics, culture, politics, and globalization, while cultivating basic wine literacy.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 241. Health and Medical Geography. 3 Credit Hours.**

Integrates public health and medicine with human and environmental geography using three approaches: ecological (the interaction of disease and our natural/built environments), social (the behavioral effects of culture, poverty, and politics), and spatial (using geospatial technology to better understand and improve health services and outcomes).

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 266. Metropolitan Miami. 3 Credit Hours.**

This course provides interdisciplinary perspectives on the urbanization of South Florida and on Miami's urban milieu. The course uses the case of Metropolitan Miami to introduce and illustrate a range of basic concepts in urban studies.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 281. Economic Geography. 3 Credit Hours.**

Explores processes driving spatial patterns of economic activity at the global, national, regional, and local scales. Topic areas include economic globalization, spatial distribution of industrial sectors, multinational corporations, international trade, regional economic development, and illegal economic activities. Examines the development of the global marketplace in both the developed and the developing world.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 305. Spatial Data Analysis I. 3 Credit Hours.**

The use of basic methods or quantitative analysis for spatial data, including basic descriptive and inferential statistics and special techniques for spatial data.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 306. Geographic Research Methods. 3 Credit Hours.**

The fundamentals of social science research, such as research design, hypothesis formulation, and field data collection, with particular emphasis on quantitative and qualitative geographic analytical methods.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 310. Geographic Information Systems I. 3 Credit Hours.**

The fundamentals of Geographic Information Systems (GIS). GIS is a set of hardware and software tools that allow people to work with data that are tied to a particular location. In this course students will learn how to import, analyze and display answers to spatial research questions using GIS software. By the end of the semester students should have a solid understanding of the various applications of Geographic Information Systems in numerous spheres of everyday life. No prior experience with GIS software is required for this course. CIVIC designation: This section of the course is taught with the principles of civic engagement and service learning in mind. To satisfy these principles, students will be paired with a community organization in need of mapping, and will complete their final project in partnership with the community organization. For more information on civic engagement and academic service earning please visit <http://civic.miami.edu/>.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 315. Digital Cartography. 3 Credit Hours.**

An introduction to cartographic methods, interpretation and history. Students learn basic principles of visual representation, how to map qualitative and quantitative data, and how to prepare maps for publication and the web.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 321. Remote Sensing of the Environment. 3 Credit Hours.**

Theory and techniques of environmental remote sensing and imagery interpretation for earth resources monitoring and management.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 331. Sustainable Development. 3 Credit Hours.**

The concepts of sustainable development, its origins, and the global conventions associated with it. We use indicators of human well-being, governance, environmental conservation, social inclusion, and economic prosperity to evaluate how countries are making their development trajectories more sustainable. Although most of our discussion adopts a global perspective, the research conducted by students is focused on the challenges for implementing sustainable development policies in tropical and sub-tropical countries.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 332. Climatology and Extreme Weather. 3 Credit Hours.**

Covers introductory information about Earth's atmosphere, weather development, and extreme weather events. Introduces basic concepts of the science of weather and climate, and current scientific developments in areas such as extreme weather forecasting and global climate change.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 334. Biogeography and Conservation. 3 Credit Hours.**

Explores the modern science of biogeography and its implications for the design of spatial strategies to conserve biodiversity and ecosystem services. Examines the history of biogeography and its geographical and ecological foundations. Discusses the fundamental biogeographical processes and uses them to investigate the evolution of biotas and explain the current biogeographic patterns. Explores the emerging field of conservation biogeography and its applications.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 335. Sustainable Food Systems. 3 Credit Hours.**

A sustainable food system sustains environmental health and local economies, and is socially just. We will explore the intricacies of global geographies of major food systems and how these systems have come to be. We will identify where major food types are produced, why and where the major demand centers are. Further, we will seek answers to fundamental food-related questions, including: in an age of plenty, why do people still starve, and what can be done about it? How do we explain malnutrition in some parts of the world and obesity in others? Can there really be such a thing as a "sustainable global food systems?" Finally, we will examine what the future implication for food is through exploration and evaluation of a range of visions for a safe, sustainable food system.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 336. Hazards and Disasters: The Nature-Society Interface. 3 Credit Hours.**

Explores how human-environment interactions determine the distribution, causes and consequences of natural hazards and disasters.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 341. Population, Health, and Environment. 3 Credit Hours.**

Global human population dynamics and implications for environmental sustainability; topics include population growth and structure, mortality and fertility patterns, migration, urbanization, aging, and household composition.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 343. Population, Sustainability, and the Media. 3 Credit Hours.**

Explores opposing views of population growth and environmental sustainability through the media and cinema: contrasts "Doomsters" who believe population growth and resource consumption threaten human survival and pro-growth "Boomsters" who believe human ingenuity and technology will continue to allow humankind to prosper.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 345. Drinking Water: Past, Present, and Future. 3 Credit Hours.**

Explores the physical, social, economic, and political dimensions of global water insecurity and the management of global drinking water supplies through an interdisciplinary social science lens.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 346. Immigrant and Refugee Health. 3 Credit Hours.**

A theoretical background essential for understanding the complex interaction of migration and health. Students will gain a basic understanding of the theories surrounding the movement of people within and across political boundaries. Emphasis will be placed on the health issues experienced by displaced populations including refugees, migrants, and internally displaced persons. We will explore some of the difficulties that receiving communities face in addressing the health needs of migrants, the roles of actors involved in working with displaced populations and how emigration of a large segment of the population, either abruptly or over time, affects sending communities as well. Much of the class will consist of guest speakers and case studies presented by different healthcare professionals working with migrant communities, with examples of the problems faced and solutions achieved in addressing issues of immigrant and refugee health drawn from both national and international experience.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 348. Climate Change and Public Health. 3 Credit Hours.**

The mechanisms by which climate change adversely affects human health, and the policy options for mitigating our exposure.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 351. Geopolitics and Peacebuilding. 3 Credit Hours.**

Explores the political and legal responses, both national and international, to violations of Human Rights associated with conflicts and totalitarian regimes around the world, with emphasis on the peace building process in diverse geographical locations.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 352. Crime and the City. 3 Credit Hours.**

Explores why there is so much violent crime in certain cities of the Americas and why there are such marked spatial differences between, and within, these cities. Contrasts and discusses specific issues (and myths) of crime, punishment, and policing in the Americas using a variety of academic and institutional research on violent crime.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 353. United States National Security. 3 Credit Hours.**

Examines a broad spectrum of such challenges to US national security, simulating the role of policy makers and strategists for the Office of the President.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 354. Global Human Rights. 3 Credit Hours.**

Equips students with a broad perspective to think critically about the global issues surrounding the foundations of Human Rights together with questions about its universality, reach, and enforceability.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 355. Global Political Economy. 3 Credit Hours.**

Explores the relationship between the global economy and politics, as governments seek both to shape it and to respond effectively to the constraints and opportunities it provides.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 356. Latin American Political Economy. 3 Credit Hours.**

Examines Latin America's economic development, analyzing different developmental strategies, resource endowment, institutional framework, and other related variables.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 361. Urban Sustainability in Asia. 3 Credit Hours.**

The emerging field of urban sustainability from an interdisciplinary perspective by providing major theories, methodologies, and practices in sustainable urbanism. Specific attention is paid to urban resilience, economic inequality, urban ecology, and environmental injustice in Asian cities.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 362. World Urban Geography. 3 Credit Hours.**

An introduction to the principles and methods that apply to the geographic study of cities and urbanization.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 366. Cities in Time and Space. 3 Credit Hours.**

Interdisciplinary perspectives on the city, urbanity, and urbanization through a series of wide-ranging historical-geographical contexts. Field excursions are incorporated into the course.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 381. Geography and Development in Africa. 3 Credit Hours.**

A survey of the geography of Africa south of the Sahara, with particular emphasis on development and the role of African states in the international system.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 382. Political Geography of the Middle East. 3 Credit Hours.**

Geography of the Middle East with emphasis on current political topics.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 383. Geography and Development in South America. 3 Credit Hours.**

An introduction to the geography of South America. Explores the interface between societies and nature in this diverse and complex world region.

Covers the major challenges that the countries of the continent are facing to improve their socio-economic indicators as well as protect their unique natural ecosystems.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 384. Geography of South Florida. 3 Credit Hours.**

Human and physical geography of South Florida.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 385. Jewish Geography. 3 Credit Hours.**

Facts of Jewish history, geography, and demography both in the world and the United States. Basic geographic concepts that help us to understand the Jewish world and provide a basis for understanding the various ways that Jewish communities have adapted to different geographic circumstances.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 386. China in the 21st Century. 3 Credit Hours.**

The specifics of the newly-emerging economic and political giant of Asia-China, with an explicit emphasis on the patterns and characteristics of economic transition and reform, as well as how reform has reshaped China's geo-economic landscape, natural environment, and the international political and economic order.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 390. Topics in Geography. 3 Credit Hours.**

Content and prerequisites announced when offered. Course may be repeated for credit if content varies.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 398. Independent Research. 0-6 Credit Hours.**

Independent research conducted one on one with a faculty member.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 399. Independent Study. 0-6 Credit Hours.**

Independent study.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 402. Geographic Thought and Analysis. 3 Credit Hours.**

An introduction to the history of geographic thought and geographic analysis, and to some important sub-disciplines of Geography. At the end of the semester, students will have a better understanding of the history of Geography, of its place in the academy, and important theoretical and methodological debates and themes within the discipline. Our purpose in this seminar is to create a dynamic and focused intellectual environment in which learning is a collective process. To achieve that we will analyze, critique, question and debate the weekly readings. There will be little formal lecturing on my part. Instead, class time will be spent in open discussion and hands-on projects completed individually or in teams. Throughout the semester, we will also host guest speakers, who will give you insights into their scholarship and give you further exposure to the discipline of Geography. Be ready to read and write a lot, and come to class prepared to discuss!

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 405. Spatial Data Analysis II. 3 Credit Hours.**

Social and environmental science applications of spatial statistical analysis illustrated with data and numerical (simulation experiments) examples employing interactive software. This course's focus is on spatial autocorrelation.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 406. Survey Research Methods. 3 Credit Hours.**

The use of survey research including the choice of a survey mechanism, sampling, questionnaire design, survey logistics, survey analysis, and reporting of results.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 410. Geographic Information Systems II. 3 Credit Hours.**

An introduction to spatial analysis, which consists of techniques for analyzing patterns of and interrelationships between spatial data. Topics include vector polygon editing and topology, integration of raster and vector data, surface analysis and 3D analysis, suitability mapping, spatial modeling, and multi-criteria evaluations.

Prerequisite: GEG 310.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & Spring.

**GEG 412. GIS for Health and Environment. 3 Credit Hours.**

This course provides practical experience in using spatial technologies to address issues of health and environment. This course will provide an introductory level approach to using the ArcGIS software, so even if you have never used it, you can learn what you need. Lectures, discussions, readings and guest speakers will provide content and background. A final project will allow you to explore your own interests.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 414. Crime Mapping and Analysis. 3 Credit Hours.**

Provides a basic understanding of the spatial analysis of issues related to criminal justice and crime mapping using state-of-the-art GIS software.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 415. Web GIS. 3 Credit Hours.**

Map serving technologies and internet map design, focusing on the programming concepts needed to construct and implement high-quality web mapping applications. Lab exercises will make use of both the commonly used open source GIS and related programming tools for customizing web-based mapping applications, as well as the leading proprietary web mapping capabilities provided in ESRI's ArcGIS Server. Students build their own on-line interactive, customizable maps and will learn the basics of client/server architecture and processing, JavaScript programming, and XML/HTML basics.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 421. GIS and Environmental Modeling. 3 Credit Hours.**

Space-time modeling in a GIS environment with emphasis on raster-based models of land cover change, urban expansion, species distribution, wildfire propagation, and other environmental issues.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 432. Climate Change and Security. 3 Credit Hours.**

There is an emerging global consensus that climate change will stress the economic, social, and political systems that underpin each nation state. Where institutions and governments are unable to manage the stress or absorb the shocks of a changing climate, the risks to the stability of states and societies will increase.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.



**GEG 490. Topics in Geography. 0-3 Credit Hours.**

Select topics in Geography. Contents varies by semester and is indicated in parenthesis following course number and title in Class Schedule.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 501. Capstone Research Seminar. 3 Credit Hours.**

Project-based fundamentals of social science research; emphasizes research conceptualization and design, application of methods, data management, scientific writing, multi-modal presentation of findings, and professional development skills.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 505. Seminar in Methods of Analysis. 3 Credit Hours.**

The use of advanced quantitative, qualitative, and mixed methods in the solution of geographic research problems.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 507. Seminar in Field Methods. 3 Credit Hours.**

With a focus on geospatial applications, this methods course introduces students to field research addressing complex socio-environmental issues. The course includes exercises with GPS data collection; geo-tagged photography; ground truthing; spatial survey design; and distributed GIS. Various research areas and cognate field methods including environmental demography, community surveying, cultural mapping, and multi-sited ethnography.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 519. Immigration to the United States. 3 Credit Hours.**

A description and analysis of current immigration patterns in the United States.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 520. Sustainable Cities. 3 Credit Hours.**

The emerging field of urban sustainability from an interdisciplinary perspective, by providing major theories and methodologies in sustainable urbanism, especially in terms of urban resilience, economic inequality, urban ecology, and environmental justice.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 530. Conservation and Development. 3 Credit Hours.**

Explore the synergies and trade-offs between biodiversity conservation and human development. Uses the concept of green infrastructure to demonstrate as biodiversity conservation is an essential component of human development. Discusses the global conventions that seek to protect biodiversity conservation and how they have been implemented worldwide. Evaluate the roles played by governments, NGOs, local communities, corporations, and multilateral agencies to protect biodiversity. Map current global efforts to protect global ecosystems and identify the major bottlenecks. This is a research-based course in which students learn how to collect and analyze conservation and development data as well as improve their presentation and writing skills.

**Components:** RSC.

**Grading:** GRD.

**Typically Offered:** Fall.

**GEG 532. Conservation Biogeography. 3 Credit Hours.**

Explore/ the emerging discipline of Conservation Biogeography, that is the application of biogeographical principles, theories, and analyses to problems concerning the conservation of biodiversity. Discusses major global biogeographical patterns and processes; biodiversity patterns in terrestrial, freshwater and marine ecosystems; social values and conservation; protected area policy and financing; systematic conservation planning; and protected area design and management. This is a very intense research-based course in which students learn how to collect and analyze biogeographical data as well as improve their presentation and writing skills.

**Components:** RSC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 561. Seminar in International Development. 3 Credit Hours.**

Topics in the study of development. Content and prerequisites vary.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 562. Seminar in Urban Management. 3 Credit Hours.**

Select topics in urban management. Contents varies by semester and is indicated in parenthesis following course number and title in Class Schedule.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 563. Seminar in Urban Geography. 3 Credit Hours.**

Topics in the study of urban geography. Content and prerequisites vary.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 580. Introductory Quantitative Methods for Geographical Analysis.. 3 Credit Hours.**

Basic quantitative methods for geographic analysis.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**GEG 590. Advanced Topics in Geography. 1-6 Credit Hours.**

Content and prerequisites vary by semester.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Offered by Announcement Only.

**GEG 597. Internship in Geography. 0-6 Credit Hours.**

Students are assigned to work for a local public or private agency.

**Components:** FLD.

**Grading:** SUS.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 598. Advanced Independent Research. 0-6 Credit Hours.**

Independent research conducted one on one with a faculty member.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.

**GEG 599. Advanced Independent Study. 0-6 Credit Hours.**

Independent study.

**Components:** SEM.

**Grading:** GRD.

**Typically Offered:** Fall, Spring, & Summer.