GEOGRAPHY

http://www.as.miami.edu/geography

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 and sustainability. Physical geography is concerned with patterns of climates, climate change, 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 such as Google Earth, statistics, cartography, and others.

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

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 and sustainability in cognate social and natural sciences;
3. deepening concern for nature-society interactions and issues of environmental sustainability and development; and,
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.

In recognition of the importance of these developments, UM Geography emphasizes three major orientations in its M.A. program:

1. global urbanization
2. environment and sustainability
3. global and public health

This program provides students with an understanding of the main streams of geographical thought and familiarizes them with research design issues, including quantitative and qualitative research methodologies, survey research, remote sensing, and computer mapping and GIScience. Students also are provided with a range of Geography courses at the 600 level, and are able to take two courses, approved by their advisor, in cognate disciplines outside Geography.

Educational Objectives

The MA Program in Geography offers specializations in areas such as:

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

Geography offers courses on the Middle East, Africa, South America, and other areas.

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

Degree Programs

The Department of Geography offers a Master’s in Geography and a Graduate Certificate in Geospatial Technology. For more information on the M.A. program, please contact Dr. Richard Grant at rgrant@miami.edu or visit the Geography Department’s web page at www.as.miami.edu/geography (http://www.as.miami.edu/geography). For more information on the Certificate Program, please contact terghazar@miami.edu, or visit the Certificate Program webpage at http://www.as.miami.edu/gisc/.

Internship Credit Hour

Students are encouraged to find a suitable internship experience with the Career Planning and Placement Center or the Department Internship Director. Upon approval, 3 credit hours may be earned with an internship. These credit hours will be included in the fulfillment of M.A. requirements (GEG 635).

Major

- MA in Geography (http://bulletin.miami.edu/graduate-academic-programs/arts-sciences/geography-regional-studies/geography-ma)

Certificate in Geospatial Technology

- Graduate Certificate in Geospatial Technology (http://bulletin.miami.edu/graduate-academic-programs/arts-sciences/geography-regional-studies/geospatial-technology-graduate-certificate)

GEG 602. Geographic Thought & Analysis. 3 Credit Hours.
Seminar for Graduate and senior undergraduate students about geographic thought and geographical traditions.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 603. Research Design in Geography. 3 Credit Hours.
Designing and proposing geographic research projects based upon a critical reading of the geographical literature. Students will prepare a master’s thesis (master’s students) or dissertation (doctoral students) project proposal.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
GEG 610. 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: Fall.

GEG 613. Advanced Cartography. 3 Credit Hours.
Cartographic research techniques, cognitive mapping, distortion, transformations and cartograms. Prerequisite: GEG 280 or equivalent.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 619. 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 622. Urbanization in the Developing World. 3 Credit Hours.
Patterns and processes in large cities in the developing world are examined.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 623. Seminar in Urban Management. 3 Credit Hours.
Identification of and responses to urban problems in large cities in European and Latin American metropolitan areas. Emphasis is on demographic, cultural/ethnic, service-provision, environmental, transportation, and land-use problems. Approach is via case studies, theory applications, and planning practicalities.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 625. Advanced Independent Study in Geography I. 1-6 Credit Hours.
Advanced independent study for Two-Paper Option for first paper.
Components: THI.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

GEG 632. Seminar in Environmental Geography & Planetary Health. 3 Credit Hours.
Advanced topics in Environmental Geography from a systems approach.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 635. Internship in Geography. 1-4 Credit Hours.
Students are assigned to work for a local public or private agency.
Components: THI.
Grading: SUS.
Typically Offered: Fall & Spring.

GEG 637. Development Studies. 3 Credit Hours.
Advanced seminar on issues in contemporary development studies.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 643. 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 645. Advanced Independent Study in Geography II. 1-6 Credit Hours.
Advanced independent study for Two-Paper Option for second paper.
Components: THI.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 648. Climate Change & 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 652. Seminar on the 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 655. Field Methods and Geospatial Analysis. 3 Credit Hours.
With a focus on geo-spatial 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 filed methods including environmental demography, community surveying, cultural mapping, and multi-sited ethnography.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 656. Interdisciplinary Issues in Latin American & Caribbean Studies. 3 Credit Hours.
Political, economic, social, and cultural issues of Latin American and Caribbean area Studies.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 658. Seminar in Comparative Politics I. 3 Credit Hours.
Comparative political analysis within and across nations. Debates on state formation, democracy and development, democratization, and the role of ideas, interests, and institutions.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 661. Urban Geography I. 3 Credit Hours.
An introduction to the essential elements about the growth and development of cities. Review of the challenges of urbanization and urban sustainability in the contemporary period.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.
GEG 663. Urban Geography II. 3 Credit Hours.
Analysis of the spatial structure of urban centers, the development of and interaction between functional zones, and the movement of goods and people in urban areas.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 680. 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: Offered by Announcement Only.

GEG 681. 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 auto correlation.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 685. Digital Cartography. 3 Credit Hours.
Introduction to cartographic methods, interpretation, and history. 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: Offered by Announcement Only.

GEG 691. Geographic Information Systems I. 3 Credit Hours.
An introduction to fundamental concepts in Geographic Information Systems (GIS) and related geographic technologies. Students are exposed to leading GIS software tools used in the industry.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 692. 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: Offered by Announcement Only.

GEG 693. 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.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 695. 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.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 758. Seminar in Comparative Politics II. 3 Credit Hours.
Theoretical approaches and methodological debates in Comparative Politics.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 810. Master's Thesis. 1-6 Credit Hours.
The student working on his/her master's thesis enrolls for credit, in most departments not to exceed six, as determined by his/her advisor. Credit is not awarded until the thesis has been accepted.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

GEG 825. Continuous Registration--Master's Study. 0 Credit Hours.
To establish residence for non-thesis master's students who are preparing for major examinations. Credit not granted. Regarded as full time residence.
Components: LEC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.