GEOGRAPHY (GEG)

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 199. Introduction to GIS (Geographic Information Systems). 3 Credit Hours.
This course uses lecture and lab sessions to teach fundamental concepts in Geographic Information Systems (GIS) and introduce related geographic technologies (Global Positioning Systems, Remote Sensing, etc.). Topics include the nature and sources of digital and spatial data, map projections and datums, raster and vector data structures, raster and vector spatial analysis, and GIS project design. Students will learn to use ArcView and Idrisi, two leading GIS software programs.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 201. Topics in Geography. 3 Credit Hours.
Content and prerequisites vary.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 210. Introduction To Geographic Research Methods. 3 Credit Hours.
Explores the fundamentals of conducting 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: Fall.

GEG 212. Geography of Middle America and the Caribbean. 3 Credit Hours.
Human and physical geography of Middle America and the Caribbean.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 221. Introduction To Health And Medical Geography. 3 Credit Hours.
An introduction to health and medical geography which has recently emerged as a significant subfield integrating public health and medicine with human and physical geography and climatology. Medical geography is explored across three major themes: disease ecology (relationship between disease and the natural/human environments), social approaches (including political economy and socio-behavioral approaches), and the spatial approach (using maps and spatial statistics to identify patterns in health outcomes and health services).
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 222. Geography of South America. 3 Credit Hours.
This course is an introduction to the geography of South America. It explores the physical, political, economic, social and cultural geographies of this diverse and complex world region. The course covers agrarian and urban land-use patterns, migration and territorial development and includes urban and regional planning, health, education and social services, with particular attention given to how these interventions address problems of uneven territorial development and social inequality.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 232. 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 242. Economic and Political Geography of the Middle East. 3 Credit Hours.
Human and physical geography of the Middle East with emphasis on current topics.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 252. United States and Canada. 3 Credit Hours.
Human and physical geography of North America.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 272. 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: Spring.
GEG 280. Introduction to Cartography and Computer Mapping. 3 Credit Hours.
Methods and techniques of cartography. Cartographic representation of spatial data.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 300. Human Geography. 3 Credit Hours.
The focus is on human geography by exploring pressing global issues including population growth, migration, economic crises, environmental decline, food security, identity politics, war and urbanization. These topics will be explored through the lens of cultural geography, uncovering, how spatial interconnections and geographical interdependence shape the world as we know it. FOR BGS STUDENTS ONLY
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 301. 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 304. World Economic Geography. 3 Credit Hours.
Geographic analysis of the distribution of economic activities with emphasis on present-day patterns and trends of production, distribution, and consumption of the world's major commodities.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 311. Drinking Water: Past, Present, And Future. 3 Credit Hours.
Traces the past, present, and future of human drinking water supplies through a social science lens. Examines drinking water as a physical, social, economic, and political resource, and how the integration of these views affects the management of global drinking water supplies.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 341. Geography of Population and Development. 3 Credit Hours.
Major world population issues are discussed, including population growth, fertility patterns, mortality change, migration, ethnicity, and population structure changes.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 343. Doomsters & Boomsters: Perspective on Population Growth & Sustainability. 3 Credit Hours.
A critical look at two general views of global population growth and humankind's future prospects for sustainable well-being: so-called Doomsters, who believe that growing global human populations and resource-consuming lifestyles threaten our environment and the welfare of most human beings, and so-called Boomsters, who do not believe that population growth and consumption are a threat, but rather that the environment and lifestyles are generally improving, and that human ingenuity and technology will continue to make the world a better place.
Components: LEC.
Grading: LEC.
Typically Offered: Spring.

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 370. Conservation of Resources. 3 Credit Hours.
Problems of resource availability in an urban-industrial society.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 371. Environmental Geography: Current Issues. 3 Credit Hours.
Topics selected from a wide range of current environmental problems from a geographical perspective. Students will become familiar with a wide range of ecological processes as well as the human forces that currently modify them.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 391. Intermediate GIS (Geographic Information Systems). 3.00 Credit Hours.
This course deals with fundamental concepts of raster and vector data manipulation and analysis through lectures and laboratory exercises. Topics covered include vector polygon editing and topology, data quality assessment, integration of raster and vector data, basic concepts of remote sensing, cartographic modeling, suitability mapping, and multicriteria evaluations.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 392. 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: Spring.

GEG 420. Geopolitics. 3 Credit Hours.
Analysis of contemporary global geopolitical issues.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.
GEG 481. Introduction to Quantitative Methods. 3 Credit Hours.
The use of basic methods or quantitative analysis in geographic research.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

GEG 491. GIS and Environmental Modeling. 3 Credit Hours.
Creation, editing, management and display of spatial databases in ARC/INFO, a vector-based GIS (Geographic Information System).
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 501. Place, Region, Nature. 3 Credit Hours.
Seminar for Graduate and senior undergraduate students about geographic thought and geographical traditions.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 510. Survey Research in Geography. 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: Offered by Announcement Only.

GEG 511. Field Studies in Geography. 1-6 Credit Hours.
One to six weeks of intensive geographic field studies outside the Miami area. Lectures will be given prior to departure. The locations and topics of study will vary.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 513. 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 515. Human Dimensions of Global Environmental Change. 3 Credit Hours.
Explores the human dimensions of global environmental change using an interdisciplinary approach. The course is reading and writing intensive. Special attention is given to the central role that land-use/cover change plays in the larger realm of global environmental change.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

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 522. 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 523. 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 524. Topic in Geography. 3 Credit Hours.
Components: THI.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 530. Resources and Society. 3 Credit Hours.
This course examines the relations between human society and material nature from within a broad theoretical perspective, relating questions of science, culture, and technology to the politics and economics of natural resources, focusing particularly on water, food, and petroleum.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 543. Doomsters & Boomsters: Perspective on Population Growth & Sustainability. 3 Credit Hours.
A critical look at two general views of global population growth and humankind's future prospects for sustainable well-being: so-called Doomsters, who believe that growing global human populations and resource-consuming lifestyles threaten our environment and the welfare of most human beings, and so-called Boomsters, who do not believe that population growth and consumption are a threat, but rather that the environment and lifestyles are generally improving, and that human ingenuity and technology will continue to make the world a better place.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 545. Special Topics. 3 Credit Hours.
Content varies by semester.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 552. 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 555. 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; geotagged 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 563. URBAN GEOGRAPHY. 3 Credit Hours.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

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 582. Advanced Quantitative Methods. 3 Credit Hours.
Continuation of GEG 481. The use of statistical methods and techniques in the solution of geographic research problems.

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

GEG 585. Advanced Cartography. 3 Credit Hours.
An understanding of cartography; a high degree of fluency in the art and science of map-making. The theory, principles, concepts and techniques required to present geographically-referenced data in order to effectively communicate spatial relationships, patterns, and the results of spatial analyses. Extensive experience in creating a wide variety of aesthetically-pleasing, professional-looking maps using ArcGIS.

Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 591. Introduction to GIS (Geographic Information Systems) for graduate students. 3.00 Credit Hours.
Overview of basic concepts in GIS (Geographic Information Systems) for students wishing to get graduate credit. This class involves a student project using GIS.

Components: LAB.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

GEG 592. Advanced Environmental Remote Sensing. 3 Credit Hours.
A foundation in remote sensing and digital image processing. Special emphasis will be paid to land applications, use of satellite imagery, and the use of optical imagery in land-cover mapping. Introductory concepts of electromagnetic energy and radiative transfer; a basis for understanding remote sensing applications typically found in geography including multispectral image processing and classification.

Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 593. Intermediate GIS. 3.00 Credit Hours.
The objective of this course is to provide an introduction to analysis of spatial data in geographic information systems (GIS). The course will provide students with instruction on manipulation of raster and vector data as well as cartographic modeling using raster-based GIS software. Students also will receive exposure to introductory concepts of remote sensing and visualization, which are rapidly growing sub-fields of GIS.

Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 595. 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: Fall & Spring.

GEG 602. Place, Region, Nature. 3 Credit Hours.
Seminar for Graduate and senior undergraduate students about geographic thought and geographical traditions.

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

GEG 603. Advanced 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: Offered by Announcement Only.

GEG 610. Survey Research in Geography. 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: Offered by Announcement Only.
GEG 615. Human Dimensions of Global Environmental Change. 3 Credit Hours.
Explores the human dimensions of global environmental change using an interdisciplinary approach. The course is reading and writing intensive. Special attention is given to the central role that land-use/cover change plays in the larger realm of global environmental change.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

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 Europe 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. Advance 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 635. Internship in Geography. 1-4 Credit Hours.
Students are assigned to work for a local public or private agency.
Components: THI.
Grading: GRD.
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 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: Fall, Spring, & Summer.

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, geotagged 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 661. Advanced Urban Geography. 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 663. URBAN GEOGRAPHY. 3 Credit Hours.
Components: LSN.
Grading: GRD.
Typically Offered: Fall.

GEG 680. Introductory Quantitative Methods for Geographical Analysis.. 3 Credit Hours.
Basic quantitative methods for geographic analysis.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

GEG 681. Advanced Spatial Statistics. 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. Advanced Catography. 3 Credit Hours.
An understanding of cartography; a high degree of fluency in the art and science of map-making. The theory, principles, concepts and techniques required to present geographically-referenced data in order to effectively communicate spatial relationships, patterns, and the results of spatial analyses. Extensive experience in creating a wide variety of aesthetically-pleasing, professional-looking maps using ArcGIS.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 691. Introduction to GIS (Geographic Information Systems) for graduate students. 3.00 Credit Hours.
Overview of basic concepts in GIS (Geographic Information Systems) for students wishing to get graduate credit. This class involves a student project using GIS.
Components: LAB.
Grading: GRD.
Typically Offered: Offered by Announcement Only.
GEG 692. Advanced Environmental Remote Sensing. 3 Credit Hours.
A foundation in remote sensing and digital image processing. Special emphasis will be paid to land applications, use of satellite imagery, and the use of optical imagery in land-cover mapping. Introductory concepts of electromagnetic energy and radiative transfer; a basis for understanding remote sensing applications typically found in geography including multispectral image processing and classification.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

GEG 693. Intermediate GIS. 3.00 Credit Hours.
The objective of this course is to provide an introduction to analysis of spatial data in geographic information systems (GIS). The course will provide students with instruction on manipulation of raster and vector data as well as cartographic modeling using raster-based GIS software. Students also will receive exposure to introductory concepts of remote sensing and visualization, which are rapidly growing sub-fields of GIS.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Spring.

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. 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.

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 820. Research in Residence. 1 Credit Hour.
Used to establish research in residence for the thesis for the master's degree after the student has enrolled for the permissible cumulative total in GEG 710 (usually six credits). Credit not granted. May be regarded as full time residence.
Components: THI.
Grading: GRD.
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.