School of Geosciences
University of South Florida

MASTER OF ARTS IN GEOGRAPHY

STUDENT HANDBOOK 2019-20

Revised 8/9/2019

Geography Master of Arts Program
http://hennarot.forest.usf.edu/main/depts/geosci/grad/students/
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The Master’s Program in Geography in the School of Geosciences (SGS), University of South Florida (USF) serves the needs of a growing urban population in one of the largest metropolitan areas in the southeastern United States. This program provides the theoretical foundation and methodological expertise necessary to conduct publishable-quality geographic research, as well as hands-on experience for real-world professional opportunities. Course offerings emphasize human geography, environmental geography, geographic information science (GISc) and spatial analysis.

I. ADMISSION REQUIREMENTS

Background Requirement

Students wishing to gain admittance into the Geography MA Program must have a geography baccalaureate degree, or an equivalent, from an approved/accredited college or university. However, applicants with degrees in other disciplines are encouraged to apply. Students admitted without a degree in geography will be required to take foundational undergraduate courses as determined by the Graduate Program Director before applying for the program. Such courses may include the following:

- GEA 2000 World Regional Geography
- GEO 2200 Introduction to Physical Geography
- GEO 2200L Introduction to Physical Geography Lab
- GEO 2400 Human Geography
- GIS 3006 Mapping and Geovisualization

If a student has taken a course similar to the ones listed above, the requirement for the course may be waived.

Grade Point and Graduate Record Exam (GRE)

Students must have a minimum grade point of 3.0 (on a four point scale) for the last 60 credits taken as an undergraduate, and the submission of GRE scores is required. The GRE must be taken within a five-year period preceding the application and the score submitted regardless of the grade point average. GRE scores must be submitted via an online application system with the rest of the student’s graduate application.

Letter of Intent

A letter of intent must accompany the online graduate application. The letter should highlight the applicant's specific academic interests and professional goals. Importantly, it must also indicate which faculty member(s) the applicant is potentially interested in working with, as her/his thesis advisor [please refer to the list of Geography (GPY) and Environmental Science and Policy (ESP) faculty on page 18].

Letters of Recommendation

The online graduate application must also include three (3) letters of recommendation. Those letters should be solicited from sources who are familiar with the applicant's academic/work history and performance.
Application Deadlines

The application deadlines for fall semester admissions are **February 15** for those applying for a Graduate Assistant (GA) position, and **June 1** for those not applying for a GA position and for domestic applicants. The application deadline for spring semester admissions is **October 15**. There is no summer semester application or admission.

Students are encouraged to apply at least two months before the application deadline to allow time for the processing of paperwork. For application and application fee information, visit the Graduate Admissions Office (https://www.usf.edu/admissions/graduate/index.aspx) website. All application materials must be received by the application deadline to receive a full consideration.

Advising

When a student gains admission to the program, the Graduate Program Director will assign a program advisor. The role of the advisor is to guide the student in selecting appropriate courses during the first semester and to suggest possible advisors and other options based on the student’s interests and needs.

Prior to selecting a program advisor, the student is strongly advised to meet with each of the Geography faculty in the School of Geosciences (SGS) in order to determine the best academic "fit." Once the student has selected a program advisor, the student, in close consultation with the advisor, should select a thesis committee.

For students completing a thesis, the program advisor also serves as the thesis advisor (major professor). The advisor and at least one committee member must be a Geography and/or ESP faculty member in SGS. The thesis advisor is responsible for guiding the student through thesis proposal preparation, thesis writing, and the thesis defense. Students may change advisors and committee members during their program.

Graduate Student Advisory Committee Expectations of Conduct

The following expectations will be followed by all participants involved in a thesis committee, including student, advisor (major professor) and committee members:

1) Regular communication about research progress between the student and the committee members.

2) If major changes occur to the proposed study, the student, in consultation with her/his advisor, is responsible for calling a committee meeting.

3) If concerns arise either with regards to what might be considered major changes within the thesis committee, or other matters pertaining to the pursuit of the proposed study, these concerns will be resolved by the Graduate Program Director working in conjunction with the GPy/ESP Graduate Committee and the Director/Chair of SGS. If the Graduate Program Director is the student’s major professor, then the Director/Chair of SGS will appoint another faculty to head that committee. If the concerns cannot be resolved at that level, then the matter will be dealt with solely by the SGS Chair/Director. If resolution cannot be reached at the school level, the student has the right to file a grievance with the College of Arts and Sciences. If a student is considering such a step, she/he is strongly encouraged to review the USF Graduate Catalog section of University’s Academic Grievance Procedures as time limits apply.
II. FINANCIAL SUPPORTS

Graduate Assistants
Graduate assistantships (GAs) are awarded annually. Students are usually given a two-year contract as a graduate assistant subject to satisfactory academic progress and satisfactory work performance. If a student would like to be considered for a graduate assistantship, s/he should complete the Graduate Assistantship Application form (available at the USF SGS Website) and upload it, along with other application materials, via the USF online application system. Graduate assistantships are awarded based upon merits, i.e., grade point average, GRE scores, and original application materials.

GAs are under the direct supervision of the Chair of SGS and the Graduate Director who assign specific duties to students. Typically students are required to supervise labs, grade exams, assist with audio-visual equipment, and teach specific lectures in their assigned courses. Students may be assigned to assist particular faculty. When this occurs, the faculty member is the direct supervisor of the GA.

Project (Research) Assistants
Research Assistants (RAs) are students who are hired to assist faculty with grant-funded projects. Students hired as RAs, for example, will complete computer analysis, cartography, fieldwork, and/or laboratory analysis related to a project. Students may be hired on salary or on an hourly basis. The rate of pay varies from project to project. Students are selected for these positions based upon the skills needed for individual projects.

Other Financial Support
The university’s Center for Urban Transportation Research (CUTR), the United States Geological Survey (USGS), and the Water Institute (in CAS/SGS) sometimes hire Geography and ESP graduate students. Students may submit applications for employment to these agencies directly. In addition, part-time and full-time jobs in the above programs are frequently posted on the bulletin board immediately outside of the SGS main office (NES 201).

Fellowships
Fellowships are funds received by students for which no GA or RA work is required. A listing of potential fellowships can be found at the website of the Office of Admissions website at: http://www.usf.edu/admissions/graduate/graduate-assistantships.aspx.

Scholarships, Grants, Work Study, and Loans
The USF Graduate School houses a Scholarship Library that allows students to access information on private funding sources through a computerized database, as well as through source books. The Office of Financial Aid administers the Federal Work Study Program as well as several loan programs. Students interested in loans or work study should apply as soon as possible, after
January 1 of each year, for the coming academic year, which starts in August. Application packets are available outside the Office of Financial Aid (SVC 1102), or by calling (813) 974-4700.

III. DEGREE INFORMATION AND REQUIREMENTS

Degrees Offered
The School of Geosciences (SGS) offers a Masters of Arts (MA) in Geography with a thesis and non-thesis option.

Degree Requirements
Credit Hours: Students must complete a minimum of 30 semester hours of graduate level course work for the thesis option and 36 hours for the non-thesis option. Students in the thesis option must complete the core course requirements outlined below before they are eligible to enroll in thesis hours.

Required Core Courses (9 Hours):
All thesis and non-thesis students must take the following courses:

- GEO 6058 Geographic Literature and History 3
- GEO 6116 Perspectives in Environmental Thought 3

Based upon the student’s area of interest, he/she must take one course from the following list of Quantitative or Qualitative course offerings:

- GEO 6166 Multivariate Statistical Analysis 3
- GEO 6119 Geographical Techniques & Methodology: Qualitative Research Methods 3

Regional:
Students are strongly encouraged to complete at least one of the following regional courses:

- GEA 6195 Seminar in Advanced Regional Geography 3
- GEA 6215 Seminar in North American Geography 3
- GEA 6745 Asian Geography Seminar 3
- GEA 6252 Seminar in the Geography of the American South 3
- GEA 6406 Seminar in Latin American and Caribbean Geography 3
- GEA 6504 Seminar in European Geography 3

Concentrations:
Students specialize in one of the three areas of concentration (tracks) offered and must select a minimum of three courses (9 credits) from the selected track. The three tracks include:

Human Geography studies the construction of space, place, and power. It encompasses the study of economic geographies (e.g., globalization, urbanization, and development), political geographies (e.g., geopolitical struggles and new social movements), and social and cultural geographies (e.g., identities and exclusions). Human geography is key to providing insights into contemporary spatial arrangements, including the role of cities within the global economy, locating urban-rural intersections in the production of uneven development, and how class,
gender, and race shape struggles for social and environmental justice.

**Environmental Geography** links the study of nature and society and considers the ways in which conventional divisions between human and non-human (natural) worlds are bridged through the production of socio-natures. This understanding is crucial to explaining and ameliorating contemporary environmental problems, including the privatization of natural resources, inequalities in access to food and water, injustices associated with environmental hazards and undesirable land uses, and the role of human activities in spurring large-scale environmental change.

**GIScience and Spatial Analysis** concentrates on the development and application of advanced geospatial methods (such as spatial analysis, spatial simulation, spatial optimization, geocomputation, geovisualization, and spatial statistics) and technologies (such as cyberinfrastructure, cloud computing, web mapping, remote sensing, and GPS) to applied problems in human, societal, and environmental research. A thorough understanding of such geospatial methods and technologies is of key importance in the analysis of spatial data and understanding geographic patterns associated with social and environmental processes including transportation, urban dynamics, human/animal mobility, health care, and crime patterns.

The following elective courses are available in each track:

**Concentration A: Human Geography**

- GEO 6058 Geographic Literature and History 3
- GEO 6428 Seminar in Advanced Human Geography 3
- GEO 6605 Contemporary Urban Issues 3
- GEO 6475 Political Geography Seminar 3
- GEO 6345 Technological Hazards and Environmental Justice 3
- GEO 6545 Economic Geography Seminar 3
- GEO 6627 Site Feasibility Analysis 3
- GEO 6704 Transportation Geography 3
- GEO 6119 Geographical Techniques & Methodology: Qualitative Research Methods 3
- GEO 6166 Multivariate Statistical Analysis 3
- GEO 7606 Seminar in Urban Environments 3
- GIS 6307 Socioeconomic Applications of GIS 3

A regional geography course (from the list on page 6) can be substituted for a course in the Human Geography concentration.

**Concentration B: Environmental Geography**

- GEO 6116 Perspectives in Environmental Thought 3
- GEO 6345 Technological Hazards and Environmental Justice 3
- GEO 6209C Physical Geography Seminar 3
- GEO 6215 Geomorphology Seminar 3
- GEO 6217 Karst Geomorphology 3
- GEO 6255 Weather, Climate, and Society 3
- GEO 6263 Soils Seminar 3
- GEO 6286 Advances in Water Resources 3
GEO 6288 Hydrological Systems 3  
GEO 6347 Natural Hazards 3  
GEO 6166 Multivariate Statistical Analysis 3  
GIS 6038C Advanced Remote Sensing 3  
GIS 6039 Remote Sensing Seminar 3  
GIS 6306 Environmental Applications of GIS 3  
GIS 6355 Water Resources Applications of GIS 3  

Concentration C: Geographic Information Science and Spatial Analysis  
GIS 5034C Introduction to Remote Sensing 3  
GIS 5075 Global Positioning Systems 3  
GIS 6038C Advanced Remote Sensing 3  
GIS 6039 Remote Sensing Seminar 3  
GIS 6100 Geographic Information Systems 3  
GIS 6103 Programming for GIS 3  
GIS 6112 Spatial Database Development 3  
GEO 6115 Field Techniques 3  
GEO 6119 Geographical Techniques & Methodology: Applied Spatial Analysis and GIS 3  
GIS 6146 GIS Seminar 3  
GEO 6166 Multivariate Statistical Analysis 3  
GIS 6306 Environmental Applications of GIS 3  
GIS 6307 Socioeconomic Applications of GIS 3  
GIS 6355 Water Resources Applications of GIS 3  

The same course cannot be used to satisfy both the required core and concentration course requirements.

Core Course Substitutions  
Course substitutions for required core courses are discouraged, however, under certain extenuating circumstances they are allowed. Students needing a substitution for one of the required core classes should submit a written petition and complete the school’s substitution form. Only comparable graduate level courses at the same level covering similar material can serve as a replacement. The student will need to provide a syllabus of that course to his/her advisor and the Graduate Program Director who will then approve or deny the request. Major professors do not have the authority to approve the substitution of any required core courses.

Thesis Option  
Students take six credit hours of electives at a level of 5000 or higher, keeping in mind that a minimum of ten hours is required at the 6000-level. At least one of the electives must be taken outside of the student’s track, excluding GEO 6908, 6918 and 6944. Electives may also be selected from courses offered outside of the Department, with the consent of the student’s advisor and the Graduate Program Director. A maximum of six approved hours taken outside the department can be used in the student’s degree program. The remaining 6 credit hours are taken as Thesis (GEO 6971) hours.

A student in the thesis option can only apply three credit hours of Internship (GEO 6944), and
three credit hours of Directed Research (GEO 6918) and/or Independent Research (GEO 6908) toward his/her degree program.

Students are expected to present a thesis research proposal to their thesis committee shortly before or after the completion of 18 credit hours (which is to include the three core courses). The thesis committee will be given at least two weeks to review the written proposal, after which the committee will meet with the student to discuss the proposal and make recommendations. This meeting will take place at least one semester before the semester in which the student plans to graduate.

Students must present a written thesis to their advisor for approval before sending it to their thesis committee. The thesis committee should be given at least two weeks to review the thesis; any major problems should be raised at this stage by the committee. If corrections are necessary, they must be made at this time. Students must then conduct a public thesis defense during the semester in which they plan to graduate. An evaluation is made of students’ work and further changes to the thesis may be required.

Students must be enrolled in a minimum of 2 semester hours of thesis credit during the semester in which a thesis is submitted to the Graduate School.

Non-thesis Option

Students complete a total of 36 hours, with 27 hours of electives completed at the 5000 or higher course level, keeping in mind that a minimum degree requirement is 16 hours at the 6000 level. Students can also take up to 9 hours outside the department with the consent of their advisors and the Graduate Program Director. Students can apply 3 credit hours of Internship (GEO 6944), 3 credit hours of Directed Research (GEO 6918) and/or Independent Research (GEO 6908) toward their degree program. Students must pass a comprehensive written examination that is administered during the semester in which they plan to graduate.

Policy for Taking Graduate Courses outside USF and the Tampa Campus

Graduate courses offered at other universities, or other USF campuses, can have a different focus than those offered on the USF Tampa campus. Students must get approval from their advisors and the Graduate Program Director prior to taking any outside courses to verify that these courses will count toward their degrees. Additionally, only faculty on the USF Tampa campus can serve as the major professor/advisor for graduate students enrolled on the Tampa campus.

Department Policy on Academic Integrity

It is the student’s responsibility to review the graduate catalog’s section on academic integrity, which covers plagiarism. This section provides detailed examples of plagiarism, hence there should be no confusion on this matter. The university takes academic integrity extremely seriously and possible consequences of such actions include an F or FF grade for the class, or even dismissal from the university. Please see the following website link: http://ugs.usf.edu/policy/academicintegrityofstudents.pdf.

IV. GUIDELINES FOR GEOGRAPHY MA THESIS OR COMPREHENSIVE EXAMS
**Thesis Option:**

1. The student is required to present his/her thesis research at a thesis defense.
2. The thesis defense can be completed during any semesters (spring, summer, or fall).
3. A copy of the thesis must be made available in the department (second floor front desk) one week prior to the defense for public review. The student and her/his major professor are also responsible for posting appropriate public announcements regarding the thesis defense in order to be consistent with statutory requirements for a public meeting.

**Non-Thesis Option:**

1. The examining committee will be comprised of the Graduate Director and two graduate faculty members and it will be formed at the beginning of the semester in which he/she intends to conduct the comprehensive exam.
2. Non-thesis students are required to complete a six-hour long written, *open book*, comprehensive exam, which typically consists of a series of questions that are prepared by the examination committee. Students have to answer the questions during the exam.
3. The exam can be completed only during the spring or fall semesters.
4. Students are encouraged to complete the exam during the last semester of their coursework. The exam must be completed no later than one semester after the student completes the coursework for the degree. The student must be registered for two credits in the semester in which the exam is completed.
5. All non-thesis examinations will be scheduled for the same day each semester (i.e., all students will sit for the exam at the same time), the date being set by the Graduate Director. Students must coordinate with the Graduate Director when they will take the exam.
6. Questions are solicited and organized by the student’s examination committee.
7. The answers to the questions are evaluated by the student’s examination committee within two weeks of the exam.
8. If the answer to any question is determined to be incorrect or incomplete, the student may be required to retake that portion of the exam in the form of an oral exam that is only open to the committee. Students are encouraged to complete the oral exam in the same semester they complete the first written exam.
9. If the student fails all portions of the exam, she/he will have one opportunity to retake the entire exam. This second exam must be completed no later than the semester after the student receives notification that a second exam is necessary.
10. If it is determined that the student did not successfully complete his/her comprehensive exam after their second attempt, he/she will be dismissed from the program.

**Preparation Guidelines for the Non-Thesis Geography MA Comprehensive Exam**

1. The student must meet with his/her examination committee once the committee is formed at the beginning of the semester in which he/she intends to conduct the comprehensive exam.
2. The date for the exam, set by the Graduate Director, is typically at least two months past the beginning of the semester in which the exam is to be completed, and no later than two weeks prior to the beginning of final exam week as scheduled by the university. The exam must be completed no later than one semester after the student completes the
coursework for the degree. Please remember that students must be enrolled for at least two graduate hours in the semester they plan to graduate.

3. Questions are developed by the student’s examination committee members.

4. At least six weeks prior to the exam, the student will be provided with preparation materials for the exam by the examination committee members.

5. These preparation materials can consist of the following:
   a. Specific themes for the question(s) to be asked on the exam. The information provided should be specific enough to allow the student to prepare on his/her own for the question(s).
   b. A reading list that consists of materials related to the question(s) to be asked on the exam. By reviewing and understanding this literature, the student should be able to successfully answer the question(s) on the exam.

6. Any questions or concerns that the student has related to the comprehensive exam should be directed to his/her examination committee.

**Guidelines for Students Switching from the Thesis to Non-Thesis Option**

1. Students planning to switch from the thesis option to the non-thesis option should consult their advisors and the Graduate Program Director prior to making any change.

2. Students switching to the non-thesis program will be required to complete all requirements set forth in the most current Graduate Catalog.

3. As per the guidelines set forth by the USF Graduate Handbook, if a student changes from thesis to non-thesis in a semester that he/she is enrolled in thesis hours, these credits can be exchanged without academic penalty if a Graduate Studies Petition is filed with Graduate Studies prior to the last day of the drop/add period.

4. If a student enrolled in the thesis option has already taken thesis credits, but elects to change to the non-thesis option, the accumulated thesis credits may not be exchanged, or converted to another non-structured credit. The thesis hours will remain in the transcript and will retain the “Z” grade.

5. Students switching from the thesis to the non-thesis option will be required to complete the comprehensive written exam as indicated in the “Guidelines for Non-Thesis Comprehensive Exams.”

6. Students can also transfer up to 9 graduate credits from other institutions for inclusion in their non-thesis program of study. Transfer courses intended to meet non-thesis program requirements must be approved by the Graduate Program Director.

7. Graduate assistants who switch from the thesis to the non-thesis option will forfeit their assistantship at the end of that contract period.

*Note: The non-thesis option is not available for students on graduate assistantships.*
Appendix I

List of Graduate Courses Offered by the School of Geosciences for GEP Program

**EVR 6101** GEOMORPHOLOGY FOR ENVIRONMENTAL SCIENTISTS (3). Course will explore the evolution of landscapes, natural processes that alter Earth's surface, and rates of change in the surficial environment. The course will emphasize topics relevant to environmental scientists in Florida - esp. soils, karst, & coasts.

**EVR 6216** ADVANCES IN WATER QUALITY POLICY AND MANAGEMENT (3). Conceptual structure and practical implementation of U.S. watershed-based water quality regulations and policies. Practical application of scientific information and quantitative methods in management/policy decisions for water quality protection.

**EVR 6320** ENVIRONMENTAL MANAGEMENT (3). This course introduces the students to environmental management from technical and non-technical perspectives. The major topics covered will be water and air quality, environmental sustainability, collaboration and building consensus.

**EVR 6408** WILDLIFE ECOLOGY (3). Population ecology, animal behavior, food resources, habitat resources, wildlife diseases, predation, competition, wildlife and water, wildlife and soils, hunting and trapping, exotic wildlife, urban wildlife, and conservation

**EVR 6921** SCHOLARLY PRESENTATION OF ENVIRONMENTAL RESEARCH (1-3). Discussion and practice in methods of writing, presenting, and defending cross-disciplinary environmental research. Written and oral assignments on communicating research objectives, methods, results, theory, and analysis of policy relevance. Prerequisite: Second year in the M.S. program in ESP, or permission of instructor

**EVR 6922** ESP CAPSTONE SEMINAR (3). A capstone graduate course that integrates issues related to science, policy and management in making decisions. Each semester, the program selects an environmental issue to serve as a case study. Some anticipated themes include global warming, water quantity and quality, air pollution and restoration. Prerequisite: Standing in the M.S. program or Graduate Certificate program in ESP, or permission of instructor

**EVR 6930** RESEARCH COLLOQUIUM IN ENVIRONMENTAL SCIENCE AND POLICY (1).

**EVR 6934** SPECIAL TOPICS IN ENVIRONMENTAL SCIENCE AND POLICY/SEMINAR IN NATURAL ENVIRONMENTS (3). A core course in the Geography and Environmental Science and Policy Doctoral Program that examines natural environments via sets of readings, discussion, and research. Students will be exposed to a wide variety of perspectives and scientific methodologies related to various aspects of the natural environment. (PR: GS and CI).

**EVR 6936** SEMINAR IN ENVIRONMENTAL SCIENCE (3). A seminar course that reviews a major theme or themes in environmental science that integrates knowledge and research from various scientific disciplines.
EVR 6937  SEMINAR IN ENVIRONMENTAL POLICY (3). Critical assessment of environmental policy and regulatory formulation, implementation, evaluation, and revision in the context of scientific, technological, institutional, political, social and economic factors; case studies of major U.S. policies.

EVR 7021  DOCTORAL DISSERTATION PREPARATION (3). This course will assist students in developing dissertation topics; to think creatively about their topics; to draft a dissertation proposal and a dissertation outline. Students should register for either evr or geo 7921 depending on his/her subject area.

EVR 7980  DOCTORAL DISSERTATION RESEARCH (2-15 var.).

GEA 6195  SEMINAR IN ADVANCED REGIONAL GEOGRAPHY (3). Analytic study of a selected region of the world. Repeat once for credit, but region may not be repeated. (PR: GS in Geography).

GEA 6215  SEMINAR IN NORTH AMERICAN GEOGRAPHY (3). Advanced survey of historical and contemporary issues in North American geography including: west and non-west exchange, revolutionary transformation, nation-building, regional disparities, and continental relations among states. (PR: GS in Geography or CI).

GEA 6252  SEMINAR IN THE GEOGRAPHY OF THE AMERICAN SOUTH (3). Intensive examination of regional geographic studies and their application to the American South, integrating concepts related to the physical and cultural landscapes, economic growth and change, urbanizations, and cultural diffusion processes. (PR: GS in Geography or CI).

GEA 6406  SEMINAR IN LATIN AMERICAN AND CARIBBEAN GEOGRAPHY (3). Readings and discussions organized around an examination of regional and systematic analysis of selected topics of Latin American and Caribbean geography. Emphasis is on combining physical and cultural analysis of this region. (PR: GS in Geography or CI).

GEA 6504  SEMINAR IN EUROPEAN GEOGRAPHY (3). Readings and discussions organized around an examination of regional and systematic analysis of selected topics of European Geography. Emphasis is on combining physical and cultural analysis of this region. (PR: GS in Geography or CI).

GEA 6745  ASIAN GEOGRAPHY SEMINAR (3). Analysis of regional divisions and spatial variations within Asia. Examines the significance of Asia in the global context. Focus on political, economic, cultural, and historical geographies, including development, environment, religion and gender. (PR: GS in Geography or CI).

GEO 6058  GEOGRAPHIC LITERATURE AND HISTORY (3). The origins and development of the discipline as revealed through an examination of the principal written sources. (PR: GS in Geography, or CI).

GEO 6116  PERSPECTIVES ON ENVIRONMENTAL THOUGHT (3). Analysis of the evolution of the major schools of environmental thought from antiquity to present-day green analysis, deep ecology, eco-feminism, and post-modern ecology. (PR: GEO 6058 or CI)
GEO 6115 ADVANCED FIELD TECHNIQUES (3). Field examination of one region. Students will complete field work in human and physical geography in a selected area. (PR: GS in Geography or CI).

GEO 6119 QUALITATIVE RESEARCH METHODS (3). A synoptic and detailed treatment of the subject, and an examination of the conceptual frameworks and practical issues behind data acquisition and analysis and how to interpret results.

GEO 6166 MULTIVARIATE STATISTICAL ANALYSIS (3.) Examination of advanced statistical approaches used by geographers. Descriptive, spatial and inferential statistics and multivariate analysis are highlighted. (PR: GS in Geography or CI, GEO 3164C).

GEO 6209C PHYSICAL GEOGRAPHY SEMINAR (3). Analytic study of one or more topics from physical geography. Selected problems may include hydrology, physiography, meteorology, climatology, soils, or vegetation, etc. May be repeated once. (PR: GS in Geography or CI).

GEO 6215 GEOMORPHOLOGY SEMINAR (3). Advanced examination of geomorphic processes and landforms with an emphasis placed on the formation and evolution of landscapes on a variety of scales. (PR: GEO 4372 or CI).

GEO 6217 KARST GEOMORPHOLOGY (3). An in-depth examination of the geomorphic aspects of karst landforms. The objectives, methods and results of karst geomorphic studies in which both field and laboratory analysis have been applied to geomorphic problems are reviewed. (PR: GS in Geography or CI).

GEO 6255 WEATHER, CLIMATE AND SOCIETY (3). This course explores the societal impact of weather, as well as the human impact on weather and climate. Students lead and participate in discussions on topics such as weather hazards, extreme temperature and human physiology, historical civilization and extreme climate, economic value of forecasts, weather modification, urbanization, and other land use change, anthropogenic aerosols, past and future climates. (PR: undergraduate general meteorology or CI).

GEO 6263 SOILS SEMINAR (3). Examination of how earth systems influence soil formation and variation. Detailed analysis of soils climosequences, biosequences, toposequences, lithosequences, chronosequences, and anthrosequences. (PR: GEO 4372 or CI).

GEO 6286 ADVANCES IN WATER RESOURCES (3). Water resources policies are viewed from theoretical and practical perspectives focusing on management strategies in different physical and human environments. (PR: GS in Geography or CI).

GEO 6288 HYDROLOGICAL SYSTEMS (3). A systematic approach to hydrology using the drainage basin as the fundamental unit of analysis is used to explore form and process, while modeling streamflows. (PR: GEO 4372 or CI).

GEO 6345 TECHNOLOGICAL HAZARDS AND ENVIRONMENTAL JUSTICE (3). Examination of theories, debates, methods, and models that improve our understanding of human vulnerability to technological hazards and risks, with emphasis on issues of fairness and equity in the distribution and impacts of hazards. (PR: GS in Geography or CI).
GEO 6347  NATURAL HAZARDS (3). Analysis of natural hazards integrating principles of physical, social, economic, political, and technical forces that affect extreme geophysical events. (PR: GEO 4372 or CI).

GEO 6428  SEMINAR IN ADVANCED HUMAN GEOGRAPHY (3). Analytic study of a problem selected from aspects of the human landscape (urban, political, economic, population, settlement). (PR: GS in Geography or CI).

GEO 6475  POLITICAL GEOGRAPHY SEMINAR (3). Advanced investigation of geopolitical issues including: the human construction of territoriality, ethnic relations, the making of nations and states, the geopolitics of localities, and environmental policy making. (PR: GEO 4470 or CI).

GEO 6545  ECONOMIC GEOGRAPHY SEMINAR (3). An intensive examination of selected issues in economic geography including: regional development and decline; spatial labor market trends; business locational analysis; and comparative economic policy. (PR: GEO 4502 or CI)

GEO 6605  CONTEMPORARY URBAN ISSUES (3). Advanced survey of urban issues such as: industrial restructuring and urban development, inner-city ethnic relations, the geopolitics or urban governance, and urban culture. (PR: GEO 3602; GEO 4604 or CI).

GEO 6627  SITE FEASIBILITY ANALYSIS (3). A project-oriented geographic examination of urban real estate development and site feasibility practices. Hands-on course including concepts of real estate development patterns, urban growth, and site-specific factors related to feasibility of specific developments. (PR: GS in Geography, or CI).

GEO 6704  TRANSPORTATION GEOGRAPHY (3). Review of transportation issues and analysis, focusing on modeling and planning for flows of goods and people. Provides a hands-on approach to the use of GIS for such analysis. (PR: GEO 4114C; GEO 4700 or CI).

GEO 6908  INDEPENDENT STUDY (1-19 Var.) Independent study in which students must have a contract with an instructor. S/U.


GEO 6944  INTERNSHIP IN GEOGRAPHY (3). The internship in Geography is designed to provide students the opportunity to work in an appropriate governmental agency to gain practical field experience. S/U. (PR: GS in Geography, CC).

GEO 6947  DIRECTED TEACHING (1-6 Var.) (PR: GS or CI)

GEO 6970  RESEARCH METHODS IN GEOGRAPHY (3). This course stresses conducting geographic research within the scientific method. Include aspects of both quantitative and qualitative research. Specific topics include sample design, data collection, defending and discussing results and conclusions, developing oral presentations, construction of written proposals and production of a thesis. (PR: GS and CI)

GEO 6971  THESIS: MASTER’S (1-19 Var.) Repeat. S/U. (PR: CC)
GEO 7021  DOCTORAL DISSERTATION PREPARATION (3). This course is designed to assist students in discovering, framing, and developing dissertation topics; to think creatively about the theoretical issues raised by their topics; to begin research on these issues; to draft a dissertation proposal; and to draft a dissertation outline. (PR: GS and CI).

GEO 7606  SEMINAR IN URBAN ENVIRONMENTS (3). This seminar will explore topics in the study of urban environments through readings, discussion, and research. Students will be exposed to a wide variety of perspectives and scientific methodologies related to various aspects of the urban environment. (PR: GS and CI).

GEO 7938C  DOCTORAL PROFESSIONAL DEVELOPMENT IN GEOSCIENCES (3).

GEO 7980  DOCTORAL DISSERTATION RESEARCH (2-15 var.). The dissertation will be a cohesive, original, and independent contribution to scholarship. The research is to be performed under the guidance of the major professor and the supervisory committee, which determine how many total dissertation hours each student completes (maximum 42 hours). (PR: Accepted into program, GEO 7920 and permission of the student’s advisor)

GIS 6355  WATER RESOURCES APPLICATION OF GIS (3). Examination of GIS applications in water resources, including watershed analysis, pollution modeling, and water resources modeling. Use of advanced GIS analysis techniques relevant to the specific applications. (PR: GIS 6100 or CI).

GIS 5034C  INTRODUCTION TO REMOTE SENSING (3). An introduction to basic concepts, principles of photogrammetry and remote sensing, and to applications of remote sensing in natural resource management, measurements of structural parameters, and environmental monitoring for non-GISc graduate students

GIS 5049  GIS FOR NON MAJORS (3). An introduction to the concepts underlying digital information systems for non-geography majors and non-geography graduate students.

GIS 5075  GLOBAL POSITIONING SYSTEMS (3). Examination of the theory, operation and application of Global Positioning Systems (GPS). (PR: GIS for Non-Majors or permission of instructor).

GIS 6038C  ADVANCED REMOTE SENSING (3). Study of digital image processing techniques. Topics include filtering techniques, geometric and radiometric normalization, and classification algorithms with emphasis on developing. (PR: GS in Geography or CI, GEO 4124C).

GIS 6039  REMOTE SENSING SEMINAR/READINGS IN REMOTE SENSING (3). Analytic study of selected topics in remote sensing. Discussions around topics include data acquisition, sensor systems, multispectral and radar image analysis, change detection, and integration of remote sensing with GIS. (PR: GIS 6038C).

GIS 6100  GEOGRAPHIC INFORMATION SYSTEMS (3). Spatial problem solving utilizing GIS mapping and statistical methods. The course is designed to give students hands-on experience in using computerized techniques for geographic analysis. (PR: GS in Geography or CI)
GIS 6103 PROGRAMMING FOR GIS (3). Examination of the concepts and techniques for the customization of Geographic Information Systems (GIS) using object-oriented programming. (PR: GEO 6157 OR CI).

GIS 6112 SPATIAL DATABASE DEVELOPMENT (3). Development and management of spatial data for use in a Geographic Information System (GIS), including creating, editing, modifying and validating spatial data. (PR: GIS 6100 or CI).

GIS 6146 GIS SEMINAR (3). Analytic study of selected topics in GIS. The course will familiarize students with case studies involving GIS applications in environmental studies, coastal modeling, and urban planning. (PR: GIS 6100 or CI).

GIS 6306 ENVIRONMENTAL APPLICATION OF GIS (3). Examination of GIS applications in agriculture, forestry, wildlife management, biodiversity conservation, environmental assessment, water resources, and pollution modeling. Use of advanced GIS analysis techniques relevant to the specific applications. (PR: GIS 6100).

GIS 6307 SOCIOECONOMIC APPLICATIONS OF GIS (3). The course covers advanced GIS methods and their applications in socio-economic research fields, including transportation, health care, crime, and planning.

GIS 6355 WATER RESOURCES APPLICATIONS OF GIS (3). Examination of GIS applications in water resources, including watershed analysis, pollution modeling, and water resources modeling. Use of advanced GIS analysis techniques relevant to the specific applications.

GLY 6573 FLUVIAL HYDROLOGY AND GEOMORPHOLOGY (3). The course covers the mechanics of open channel flows, primarily to understand the potential energy available to do work, and the geomorphic responses to work, including channel initiation, sediment transport, and channel adjustment. (PR: MAC 2311 or the equivalent).

GLY 6824 ECOHYDROLOGY (3). This course covers hydrological processes along the atmosphere-plant-soil continuum and the ways in which hydrological processes control ecological structure and function. (PR: MAC 2311 or the equivalent).

GLY 6828 GROUND-WATER GEOCHEMISTRY (3). Chemical behavior of ground water. Includes interaction of water with aquifer materials, chemical effects of waste disposal, use of chemical tracers, and transport of hazardous chemicals. Methods of sampling and data interpretation are emphasized. Lec. (PR: One year of college Chemistry, GLY 4822, GLY 6246).

MET 6149 SAME AS GEO 6255.
Appendix II

Graduate Faculty Advisors in Geography and ESP Programs

All graduate faculty advisors in Geography and ESP programs specify those usually considered as GPY/ESP faculty. Per the eligibility to advise graduate students, regular professors at all ranks can be a major advisor and committee member; research professors at all ranks can be co-advisor and a committee member; and Geology (GLY) faculty can be co-advisor and committee member. The basic information for all faculty members in Geosciences, their ranks and their interest research areas can be found at http://hennarot.forest.usf.edu/main/depts/geosci/faculty/. All GPY/ESP faculty are listed as follows.

Fenda Akiwumi, Associate Professor, Ph.D. Texas State University (2006), Water Resources, Cultural Geography, Hydrology.

Kamal Alsharif, Associate Professor, Ph.D. University of Minnesota (2004), Water Resources, Conservation, Management.

Martin Bosman, Associate Professor, Ph.D. University of Kentucky (1999), History and Philosophy of Geographic Thought, Global City Formation, Economic Restructuring and Urban and Regional Revitalization.

Jennifer Collins, Professor, Ph.D. University College London (England) (2001), Tropical climatology, Hurricane Activity, Environmental Factors Influencing the Inter-Annual Variation of Hurricane Numbers.

Lori Collins, Research Associate Professor, Ph.D. University of South Florida (2007), LiDAR, Terrestrial Laser Scanning, 3D Printing, GPS, GIS, and Visualization Techniques.

Travis Doering, Research Associate Professor, Ph.D. University of South Florida (2007), Spatial technologies and imaging for cultural and natural heritage applications.

Joni Firat, Associate Professor, Ph.D. Florida State University (2008), Geographic Information Science, Landscape Ecology.

Shawn Landry, Research Associate Professor, Ph.D. University of South Florida (2013), Environmental Geography, Remote Sensing, Geospatial Analysis, GIS/GPS, Decision Support Systems.

Ambe Njoh, Professor, Ph.D. University of London (England) (1990), The Urban Planning/Public Health Nexus, Sustainable Development, Hygiene and Sanitation, Water Delivery Systems; Transportation and Land Use.


Steven Reader, Associate Professor, Ph.D. University of Bristol (England) (1989), Geographical Information Systems, Computer Cartography, Spatial Analysis, Medical Geography.

Ran Tao, Assistant Professor, Ph.D. University of North Carolina (2017), Geographic Information Science, spatial interactions (OD flows), spatial statistics, spatial data mining, geovisualization, transportation, migration, crime, civic conflicts.
Philip van Beynen, Associate Professor, Ph.D. McMaster University (1998), Karst Environments Pertaining to Paleoclimate Change, Human Disturbance, Environmental Indices and Sustainability.