The Department of Geography offers training in fundamental geographic skills and the opportunity for advanced study and research in a variety of fields within the discipline. Areas of faculty interest and competence include economic, human-environmental, physical, political, and urban geography; geographic education; geographic information science; global positioning systems; and remote sensing. Programs of study lead to the Ph.D., M.A., and M.S. in geography. The department has a strong record of success in graduate placement in private- and public-sector careers as well as in the academic sphere. To assist in its educational role, the department administers the Center for GIS and Remote Sensing, the Hazards Research Laboratory, the Center for Excellence in Geographic Education, and the climate and decision-making program, the Carolinas Integrated Sciences and Assessments.

Admissions
For the master's degree programs, the department does not require an applicant to have an undergraduate major in geography; rather, it requires evidence of general intellectual ability and a compelling interest in geography. For the Doctor of Philosophy program, a master's degree in geography is normally required. Applicants for all degree programs must reply to a series of questions about preparation and career goals and probable field(s) of study; at least two letters of recommendation from individuals who have personal knowledge of the applicant's academic experience and abilities; transcripts of all previous academic work; and a Graduate Application Summary form, available from the department. Applicants whose native language is not English are also required to submit a satisfactory score on the TOEFL, the IELTS International Academic Course Type 2 exam, or the PTE Academic English proficiency tests. Information on scores is available through the Graduate School Admissions page (https://www.sc.edu/study/colleges_schools/graduate_school/apply/international_applicants/). The Graduate School does not require TOEFL scores for students who have completed or working on an undergraduate or graduate-level degree from a U.S. university; however, the department prefers to see scores if they are available. Students are encouraged to enter the program at the beginning of the fall. Applicants requesting financial aid begining in the fall semester must submit completed applications by January 15; Spring admissions are considered under exceptional circumstances no later than October 15th. Details concerning admission can be obtained from the department's graduate director or electronically by accessing the department's webpage (https://www.sc.edu/study/colleges_schools/artsandsciences/geography/).
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GEOG 341 or GEOG 345 or GEOG 551 or GEOG 563.
GEOG 570 - Geography of Public Land and Water Policy (3 Credits)
Geography of public land, water, and related public trust resources (wildlife, timber, minerals, fuels, recreation, wetlands, coastal zones, wilderness); historical geography of policy; spatial aspects of current research and management.

GEOG 571 - Microclimatology (4 Credits)
Field techniques and processes in the atmospheric boundary layer including radiation, soil heat fluxes, turbulence, momentum, latent and sensible heat fluxes, moisture, and evaporation.
Prerequisites: GEOG 202.

GEOG 573 - Climatic Change and Variability (3 Credits)
Observations and theories of climatic change and variability as they occur at different space and time scales. Projections of future climates. Techniques used in climatic change research and impact analysis.
Prerequisites: GEOG 202 or equivalent.

GEOG 575 - Digital Techniques and Applications in Remote Sensing (3 Credits)
Introduction to digital image processing techniques and applications. Image correction, enhancement, spatial and spectral transformation. Land use/land cover classification, and change detection.
Prerequisites: GEOG 551 or equivalent.

GEOG 581 - Globalization and Cultural Questions (3 Credits)
This course examines cultural understandings of and responses to globalization, examining topics such as its history and theories, migration, economic integration and inequality, identity, social movements, and the environment.
Cross-listed course: ANTH 581
Graduation with Leadership Distinction: GLD: Global Learning

GEOG 590 - Beach-Dune Interactions (3 Credits)
Influence of wind on coastal systems, with emphasis on nearshore currents, sediment transport and bedforms, aeolian transport, and dunes. Minimum Junior standing required.
Cross-listed course: MSCI 590

GEOG 595 - Internship in Geography (1-6 Credits)
Internship in government agencies, private-sector businesses, and non-profit organizations under the joint supervision of sponsor and departmental. A maximum of three credits may be applied to undergraduate Geography major or to Geography master's degree. May be repeated to a maximum of six credits.
Graduation with Leadership Distinction: GLD: Professional and Civic Engagement Internships
Experiential Learning: Experiential Learning Opportunity

GEOG 701 - History of Geographic Thought (3 Credits)
A survey of the development of geographic philosophy and an analysis of geographic methodology.

GEOG 705 - Directed Individual Studies in Geography (1-3 Credits)
Directed research topics individually assigned and supervised by graduate faculty. May be repeated for credit.

GEOG 706 - Selected Topics in Cartography and Remote Sensing (1-3 Credits)
Special topics are offered in the form of short courses, seminars, and workshops. Students may take these offerings, by permission of the instructor, for variable credit. The course may be taken more than once.

GEOG 709 - Women Explorers and Travelers (3 Credits)
Examines in geographical and historical contexts the activities of various women travelers and explorers.
Cross-listed course: WGST 709

GEOG 710 - Seminar in Geography Education (3 Credits)
Review of recent literature on geography education with an emphasis on the national geography standards, spatial thinking and the use of geospatial technology in pedagogic contexts.

GEOG 711 - Seminar in Regional Geography (3 Credits)
An analysis of the total geographic complex of selected major world regions.

GEOG 712 - Urban Geography (3 Credits)
An investigation into the concepts of the urban field and the urban region.

GEOG 713 - Advanced Economic Geography (3 Credits)
Investigation into the locational aspects and the spatial systems of selected economic activities, from both regional and systematic viewpoints.

GEOG 720 - World Regional Geography for Teachers (3 Credits)
The physical and human geography of major world regions with emphasis on basic principles of regional geography. Cannot be used in M.A., M.S., or Ph.D. programs in geography.

GEOG 721 - Seminar in Systematic Geography (3 Credits)
Studies of the characteristics, processes, and distributions over the world of the different cultural and physical environmental elements, such as economic, political, or social activities, climate and landforms.

GEOG 730 - Seminar in Environmental Geography (3 Credits)
Review of recent geographic literature on nature-society interactions with an emphasis on identifying research themes and methodologies employed by contemporary geographers.
Prerequisites: GEOG 530 or GEOG 568.

GEOG 731 - Seminar in Quantitative Analysis in Geography (3 Credits)
Advanced quantitative approaches for handling and interpreting geographically related data. Multivariate procedures applicable to a variety of problems will be presented. For each topic the students will analyze data relating to their individual interests.
Prerequisites: GEOG 531 or equivalent.

GEOG 734 - Field Seminar in Third World Development Projects (6 Credits)
The student works in a developing country for two to four months on projects designed by instructor and funded by the host country.

GEOG 735 - Seminar in Political Geography (3 Credits)

GEOG 737 - Seminar in Spatial Cognition (3 Credits)
Selected topics in spatial cognition.

GEOG 740 - Seminar in Spatial Cognition (3 Credits)

GEOG 741 - Seminar in Cartography (3 Credits)
A seminar to familiarize students with current experimental techniques, literature, and research topics in cartography.

GEOG 746 - Seminar in Climatology (3 Credits)
Major theories, measures of climatic change and variability, climate models, statistical analysis, and climate impacts.

GEOG 747 - Seminar in Physical Geography (3 Credits)
Investigation of physical systems and processes at the earth's surface. Topics vary; landforms, hydrology, pedology, biogeography, quaternary science, human impacts on physical systems.
GEOG 751 - Digital Techniques of Remote Sensing (3 Credits)
Introduction to the fundamental principles and methods of digital image processing of remotely sensed data. Algorithms are discussed for preprocessing, enhancement, and classification mapping of digital data for agricultural, urban, geological, and environmental problems.
Prerequisites: GEOG 551 and course in computer programming.

GEOG 755 - Remote Sensing Modeling and Analysis (3 Credits)
Satellite-based information extraction; programming skills for digital image processing; self-developed modeling approaches; quantitative analysis of remote sensing data.
Prerequisites: GEOG 575 or equivalent.

GEOG 763 - Seminar in Geographic Information Systems (3 Credits)
Theory and application of modern automated approaches to handling geographic data. Includes computer oriented procedures for the input, analysis and display of spatial data. Areas covered range from census address matching to statewide natural resource systems.
Prerequisites: GEOG 563.

GEOG 799 - Thesis Preparation (1-9 Credits)

GEOG 801 - Historical and Contemporary Geographic Thought (3 Credits)
A survey of (1) the philosophical and intellectual foundations of Geography as a discipline, and (2) contemporary ideas and debates in major subfields of geographic research.

GEOG 805 - Advanced Directed Individual Studies in Geography (1-3 Credits)
Advanced directed research by a PhD student on geographical topics to be individually supervised by graduate faculty. This course may be taken for 1-3 credit hours of independent study by a student working closely with a faculty member on a specific research project to be defined and agreed upon between the student and a supervising faculty member.

GEOG 810 - Advanced Seminar in Human Geography (3 Credits)
Reading intensive seminar focused on conceptual frontiers and methodological debates in contemporary human geography with a secondary emphasis on intradisciplinary and cross-disciplinary affinities.
Prerequisites: any 700-level GEOG seminar course.

GEOG 811 - Advanced Seminar in Regional Geography (3 Credits)
Advanced reading and discussion of the physical, economic, social and/or cultural geography of major selected world regions.

GEOG 830 - Advanced Seminar in Environmental Geography (3 Credits)
A research seminar where students critically evaluate relevant literature, develop a research proposal, and complete a related research project in environmental geography.
Prerequisites: GEOG 730.

GEOG 841 - Advanced Seminar in Cartography (3 Credits)
A topic central to cartography will be studied. Students will critically evaluate pertinent literature, develop a research proposal, and complete a related research project.

GEOG 847 - Advanced Seminar in Physical Geography (3 Credits)
Research and discussion on various topics in physical geography. Literature varies with seminar topic but will include prevailing theories, data types, and modeling strategies in climatology, meteorology, hydrology, biogeography, soils, or geomorphology.
Prerequisites: GEOG 547 or GEOG 746.

GEOG 851 - Advanced Seminar in Remote Sensing (3 Credits)
Advanced reading and discussion in the following areas: 1) the theoretical bases of remote sensing; 2) remote sensing of biophysical variables such as plant and soil temperatures and moisture content; 3) advanced principles of optical and digital image processing; and 4) economic aspects of remote sensing of the environment.

GEOG 863 - Advanced Seminar in Geographic Information Systems (3 Credits)
A research seminar in which students conduct a detailed analysis of specific aspects of geographical data handling. This will include the design, implementation, and management of an operational geographical information system.

GEOG 899 - Dissertation Preparation (1-12 Credits)