

Professional Master's Program

The non-thesis professional degree offers students the opportunity to enhance their skills and knowledge in geography, particularly applications of GIScience (GIS). The 36-hour curriculum ensures that graduates have a foundation in methods, as well as breadth in topics from human and physical geography. The degree is ideal for professionals seeking to refine their analytical skillsets for use in areas of the private or public sectors, such as business, non-governmental organizations, environmental management fields, planning organizations, and/or education. As *core requirements*, students will take a fundamental course in GIS as well as one methods course (e.g., statistics). Six additional courses will be taken from two of three *distribution requirement* groups: topical GIS courses; human geography; and physical geography. To round out the curriculum, students design their degree plan through consultation with their major professor and their advisory committee, selecting electives and finishing with a project in lieu of a thesis. The final degree plan must be signed by all committee members and approved by the Graduate Coordinator, Department Chair, and Graduate Dean.

ADDITIONAL INFORMATION

Note: Applicants need to select a major professor and have a confirmed consultation with said faculty member before submitting application.

GRADE REQUIREMENTS

No grade below a B will count toward the degree. Any grade below a B must be replaced by retaking the course and earning at least a B. Students may retake no more than two such courses. A third grade below a B will result in the student being dismissed from the program.

FINAL COMPREHENSIVE EXAM

The comprehensive exam centers on the coursework taken during the program. The exam is administered by a three-member advising committee and is organized by the major professor. Students must schedule the exam with her/his committee. The exam is graded as either pass or fail and is the final commitment of the non-thesis professional degree.

TRACKS

The following tracks serves as guides for those who wish to have a more focused program. These tracks reflect some of the research areas of faculty members in the department. Students are not required to choose a track.

GLOBALIZATION, DEVELOPMENT AND CITIES

Our global society is more interconnected and interdependent than ever before. Globalization of trade and commerce has increased national wealth and our appetite to consume commodities, technologies, art and culture from around the world. We continue to create spectacular cities to represent our cultural, technological and architectural achievements. But even as we continue to generate extraordinary wealth, we live in a world that is riddled with social and environmental unsustainability, poverty, inequality, discrimination, prejudice, marginalization, terror and conflict. The objective of this track is to train students to understand the complexities of our global society, our cities and our unequal geographies of life and livelihood. Upon graduating, students will find themselves well trained to pursue doctoral degrees, or careers in government, think tanks, non-governmental organizations, teaching, diplomacy and elsewhere.

APPLIED GEOMORPHOLOGY

Applied geomorphology emphasizes geomorphological processes that are of societal significance, including the effects of urbanization on the physical environment and hazards such as flooding, coastal erosion and sea-level rise. This track enables students to structure their degree plans around conceptual and technical aspects of applied geomorphology. Students completing this track may continue in higher education or find employment with government research and regulatory agencies, municipalities, planning organizations, water supply districts, or environmental consulting firms.

ENVIRONMENTAL ARCHAEOLOGY

Archaeology faculty in the geography department, in cooperation with the graduate program in anthropology, direct graduate students in pursuit of either

the MS in geography or the MS in interdisciplinary studies. The focus of this program is to give students a strong foundation in selected areas of research that will prepare them for entry into research positions or doctoral programs in archaeology. Two principal areas of training are geoarchaeology and zooarchaeology, which derive strength from the faculty and laboratory/collections resources at UNT. In addition to core requirements in geoarchaeology or zooarchaeology, students complete two areas of specialization selected from the following areas: GIS and remote sensing, spatial and quantitative analysis, instrumental techniques (e.g., SEM, EDX, PIXE, stable isotopes, petrography), or zoology and ecology.

URBAN ENVIRONMENTS

This track prepares students to assume a vital role within the structure of a city government, coordinating the activities of various city departments related to environmental legislation. In addition to the normal requirements, students select courses from content areas, including urban environments, environmental science, city government structure, and environmental law and policy. This track has been developed in response to the increasing need for persons to coordinate different programs in city government, to liaison with governmental agencies, to interact with contracted environmental engineers and to bring a philosophy of sustainable environments to the planning process.

WATER RESOURCES MANAGEMENT

This track prepares geography students to assume active roles in addressing the critical issues of water supplies and water quality. Students follow a curriculum balanced among technical, scientific and political aspects of water resources management. Courses are selected from the following topical areas: techniques, geography/geology, environmental science and environmental policy. Students completing this degree track gain positions with local and regional governments, federal and state regulatory agencies, engineering firms and regional water districts.

APPLIED GEOGRAPHIC INFORMATION SYSTEMS

This track prepares students to meet the growing demand for GIS professionals. Rather than a strictly technical preparation, students acquire the foundation in applied geography that qualifies them to play vital roles in planning, policy and implementation in chosen areas such as urban geography, economic/business development, environmental science and medical geography. Courses for this track are selected from a chosen subset of the following groups: GIS technology, GIS applications, topics/cognate fields, real estate/marketing, public health administration, environmental science and applied economics.

BUSINESS GEOGRAPHY

The objective of this track is to educate students to integrate geographic analysis, reasoning, and technology in support of improved business decisions. The focus on improving the decisions made by business differentiates business geography from urban/economic geography. Participation in a business internship is encouraged. If appropriate, the results of the internship can form the basis for the student's MS thesis or problems in lieu of thesis.

MEDICAL GEOGRAPHY

This track focuses on theory and techniques that are needed to understand the spatial patterns of health outcomes, environmental risks and exposures and disease spread, as well as the distribution of health care services and lack thereof. Students specializing in this track will learn about the relationships between human activities, place, and health outcomes and how to evaluate those relationships using GIS methods, spatial and statistical analysis, and computational models.