GEOGRAPHY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN APPLIED GEOGRAPHIC TECHNOLOGY

Students in the Applied Geographic Technology program study the links between human beings and their environment as well as the links between one area of the earth's surface with another. This program is designed to prepare students for employment in technical occupations, planning, or postgraduate studies. The applied geographic technology student investigates the geographic study of environmental, economic, cultural, and political processes and becomes proficient in the fast growing field of geographic information technology. This program emphasizes the collection, analysis, and representation of earth data at scales ranging from the local to the global. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department. If you enjoy learning about the Earth and its peoples and landscapes, either in your back yard or far away, please consider the opportunities our program provides.

The Applied Geographic Technology program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; and the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include environmental consulting, pollution remediation, environmental monitoring, environmental law or public policy, resource management, geographic information systems analysis, nonprofit environmental organizations, and planning.

Program Learning Outcomes

- **Outcome 1 (GES)**: Each graduate shall develop general knowledge and understanding of the concepts of location, place, human environment interactions, movement, and region.
  - Each graduate will demonstrate an understanding of physical features and patterns of the physical environment
  - Each graduate will demonstrate an understanding of features and patterns of the human environment
  - Each graduate will demonstrate an understanding of concepts such as absolute and relative location, proximity, separation, direction, region, hierarchy, density, and dispersion, and methods that are used to describe and analyze spatial patterns
  - Each graduate will demonstrate an understanding of absolute location systems such as latitude-longitude and alpha-numeric grids
  - Each graduate will demonstrate an understanding of major spatial features and patterns in the natural environment such as those relating to climate, oceans, soils, landforms, and vegetation
  - Each graduate will demonstrate an understanding of the major processes, such as evolution, atmospheric circulation, weathering and erosion, ocean currents, plate tectonics, and volcanism that shape patterns in the natural environment.
  - Each graduate will demonstrate an understanding of the major spatial features and patterns in the cultural environment such as language, religion, and agriculture and economic, political, and demographic regions
  - Each graduate will demonstrate an understanding of the major processes such as settlement, migration, trade, technological development, diffusion, and landscape transformation that shape cultural patterns

Geology, Geology, and the Environment, Overall

- **Outcome 1:** Each graduate will develop strong written and oral communication skills, demonstrate the ability to work in a collaborative environment, and exhibit professional attitudes and behavior.
  - Each graduate will deliver oral presentations, demonstrating the ability to effectively communicate discipline-specific concepts
  - Each graduate will write scholarly papers using acceptable format and organization with proper citations to appropriate literature.
  - Each graduate will actively participate in collaborative projects and in academic field trips
  - Each graduate will demonstrate professionalism and integrity in his/her academic conduct
  - Each graduate shall develop the ability to respect and integrate diverse worldviews in problem-solving frameworks
- **Outcome 2:** Each graduate shall possess and apply critical thinking and problem solving skills.
  - Each graduate will demonstrate the ability to develop valid research questions and hypotheses
  - Each graduate will demonstrate the ability to apply proper techniques for data acquisition and interpretation in a problem-solving context
  - Each graduate will demonstrate the ability to solve open-ended problems using scientific methodology
  - Each graduate will develop the ability to make informed, scientifically-based decisions regarding environmental issues
- **Outcome 3:** Each graduate shall develop skills in quantitative, qualitative, technological, laboratory, and field procedures.
  - Each graduate will learn and employ accepted laboratory and field techniques, protocols, and safety procedures
  - Each graduate will learn to read, construct, and comprehend thematic maps and derive perspective output from a map
  - Each graduate will demonstrate the ability to apply knowledge, concepts and techniques from complementary disciplines to solve problems

Related Links

Geography - Applied Geographic Technology, BS Program Page (https://www.sru.edu/academics/majors-and-minors/geography-applied-geographic-technology/)

Professional Licensure/Certification Page (https://www.sru.edu/students/student-consumer-information/professional-licensures/)