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

Program Learning Outcomes

- **Outcome 1 (EVGE):** Each graduate shall develop general knowledge and understanding of the composition, history, and structure of the planet, and of the physical, chemical, and biological processes involved in the interactions between the geosphere, hydrosphere, atmosphere, and biosphere.
  - Each graduate will demonstrate an understanding of plate tectonic theory and be able to describe how it operates
  - Each graduate will demonstrate an understanding of the geologic time scale and the timing of major events in Earth history
  - Each graduate will demonstrate the ability to characterize and identify important rocks and minerals, and to interpret the processes by which they formed
  - Each graduate will demonstrate an understanding of the history, causes, and effects of global climate change
  - Each graduate will demonstrate an understanding of evolutionary theory and its evidence in the fossil record
  - Each graduate will demonstrate an understanding of the internal structure of Earth
  - Each graduate will be able to explain the fundamental principles of the hydrologic cycle
- Maps to:
- University-wide learning outcome:
  - 3A. Explain and predict natural phenomena through use of observation, experimentation using appropriate technology, and scientific reasoning.

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
- Maps to:
- University-wide learning outcome(s)
  - 1A. Communicate successfully with diverse audiences in speech and writing.
  - 1C. Apply analytical reading to support language use.
- **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
- Maps to:
- University-wide learning outcome(s)
  - 2A. Gather, analyze and evaluate information and ideas.
  - 2B. Produce well-supported reasons and evidence.
  - 2C. Reach well-argued conclusions and decisions.
- **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
- Maps to:
- University-wide learning outcome(s)
  - 4A. Create and use mathematics in a variety of forms including formulas, graphs, schematics, and computing, where appropriate.
  - 4B. Implement experimentation and quantitative reasoning to solve problems and make inferences.

Related Links

Environmental Geoscience - Applied Geographic Technology, BS Program Page - COMING SOON

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