B.S.G.E. in Geological Engineering

Description

The B.S. degree in geological engineering prepares students for productive careers as professional geological engineers engaged in continuous professional growth along their chosen career paths or prepares students for admission into graduate degree programs or professional schools.

Minimum Total Credit Hours: 132

Goals/Mission Statement

The educational goals of the Bachelor of Science in Geological Engineering program are an outgrowth of and consistent with The University of Mississippi Mission. While recognizing that the primary intent is to prepare graduates whose careers will serve the state of Mississippi, it is our objective to prepare graduates who will also serve the needs of the nation and the world in geological engineering and related fields. Past graduates of the program have found professional positions in a range of industries including i) geotechnical, ii) geoenvironmental, iii) geospatial information science and technology, iv) graduate education, and v) earth resources extraction. Future graduates are expected to serve the same range of industries.

Geological Engineering Program Educational Objectives

The Geology & Geological Engineering Department at the University of Mississippi is dedicated to graduating geological engineers who:

1. Practice geological engineering related to geotechnical, geoenvironmental, geospatial information science and technology, or earth resources extraction.
2. Pursue additional education, research and development, or other means of advancing their knowledge and mastery of subjects related to the discipline.
3. Conduct themselves in a responsible, professional and ethical manner.
4. Participate as leaders in activities that support service, stewardship, and economic development of the region, state and nation.

Student Outcomes

Students of the Bachelor of Science in Geological Engineering program will demonstrate achievement of the following student outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

General Education Requirements

Students must complete at least 18 semester hours of general education requirements: 3 hours in humanities, 3 hours in fine arts, 3 hours in humanities/fine arts, 6 hours in social science (including Econ 310), and the remaining 3 hours can be in any of the humanities/fine arts, social science, or general education courses as specified by the School of Engineering.

Course Requirements

Specific requirements for the B.S.G.E. include Writ 100, Writ 101, or Hon 101; Writ 102, Liba 102, or Hon 102; Math 261-264; Math 353; Chem 105, 106, 115, 116, and Phys 211, 212, 221, 222; Csci 251; Engr 309, 310, 312, 323, 340, 321; Geol 103, 106 (or 102), 225, 303, 305, 314; G E 301, 401, 405, 420, 421, 450, 470, 305 or 540. One engineering science elective must be selected from C E 431, 472, Engr 360. One geological engineering technical elective must be selected from G E 415, 460, 490, 502, 503, 507, 510, 511, 513; C E 471, 325; Engr 313, or an additional course from the Engineering Science Elective list. Please see department for advice.