

Program:	Geology
Degree:	BS
Department:	Geology and Geophysics
Contact Name:	Michael Pope, Department Head
Contact Phone:	845 2451

Outcome	Master the depth of knowledge required for a degree
Marketable Skills	<ul style="list-style-type: none"> Recognize the variability and interdependence of the Earth's systems through time and space Participate in geological surveys, prospecting field trips, exploratory drilling, well logging, or underground mine survey programs Prepare geological maps, cross-sectional diagrams, charts, or reports concerning mineral extraction, land use, or resources management, using results of field work or laboratory research Compile information and data for geological prospecting Test and analyze samples to determine their content and characteristics, using laboratory apparatus or testing equipment

Outcome	Demonstrate critical thinking
Marketable Skills	<ul style="list-style-type: none"> Apply the scientific method to accurately analyze data and frame testable predictions. Analyze and interpret geological information from sources such as survey data, well logs, bore holes, or aerial photographs. Describe the uncertainty in a complex geological system and its effect on predictions of system behavior Use laboratory and field data to develop models of geological systems Infer the state and evolution of the global Earth system from fundamental physical/chemical/biological processes

Outcome	Communicate effectively
Marketable Skills	<ul style="list-style-type: none"> Lead, train, or supervise technicians or related staff in the conduct of geological analytical procedures. Comprehensively express a scientific idea in written or oral form, supporting conclusions with data analyses and visualizations. Develop an overall understanding of a problem from the scientific literature and apply it to a new problem.

Outcome	Practice personal and social responsibility
Marketable Skills	<ul style="list-style-type: none"> Articulate the ethical responsibilities of a geologic professional and act as an ethical example for others. Know and apply the accepted practices for accurate and truthful reporting of results and citation of previous work

Outcome	Demonstrate social, cultural, and global competencies
Marketable Skills	<ul style="list-style-type: none"> Propose or critique scientific merit of proposals for natural resource use and mitigation/prediction of natural hazards

Outcome	Prepare to engage in life-long learning
Marketable Skills	<ul style="list-style-type: none"> Use the geologic literature, professional organizations and conferences and professional contacts to stay up-to-date in developments in thinking and technology. Leverage previously learned knowledge and skills in an innovative way to solve new problems

Outcome	Work collaboratively
Marketable Skills	<ul style="list-style-type: none"> Work as a member and a leader of teams of varying expertise to solve challenging multidisciplinary geological problems Assess the strengths of team members to optimize team efficiency Provide technical expertise to solve geological problems to clients or users.

Texas A&M University

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Outcome	Demonstrate critical thinking
Marketable Skills	<ul style="list-style-type: none"> • Apply the scientific method to accurately analyze data and frame testable predictions. • Apply knowledge of geological materials and systems to public policy initiative to improve the education, and physical and economic well-being of the public. • Analyze and interpret geological information from sources such as survey data, well logs, bore holes, or aerial photographs. • Infer the state and evolution of the global Earth system from fundamental physical/chemical/biological processes

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Marketable Skills	<ul style="list-style-type: none">• Work as a member and a leader of teams of scientists, policy makers and educators to solve challenging multidisciplinary problems• Assess the strengths of team members to optimize team efficiency