Texas A&M University  Marketable Skills: Doctoral

<table>
<thead>
<tr>
<th>Program:</th>
<th>Geology</th>
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<tbody>
<tr>
<td>Degree:</td>
<td>PhD</td>
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<tr>
<td>Department:</td>
<td>Geology and Geophysics</td>
</tr>
<tr>
<td>Contact Name:</td>
<td>Mark Everett</td>
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<tr>
<td>Contact Phone:</td>
<td>862 2129</td>
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**Outcome**

Master degree-program requirements, including theories, concepts, principles, and practice; develop a coherent understanding of the subject matter through synthesis across courses and experiences; and apply subject matter knowledge to solve problems and make decisions.

**Marketable Skills**

- Explain the scope, significance and limitations of geological information to land and environment stewardship and civil infrastructure stakeholders
- Develop new methods to evaluate risk and vulnerability from geological hazards and to make detailed evaluations about quality and quantity of Earth resources

**Outcome**

Apply a variety of strategies and tools, use a variety of sources, and evaluate multiple points of view to analyze and integrate information and to conduct critical, reasoned arguments.

**Marketable Skills**

- Determine whether geological data indicate a subsurface target of interest so that reliable drilling and excavation decisions can be made
- Design and execute field studies that employ geological data to solve a given geoscience problem
- Create robust and reliable inferences of fundamental Earth structures and processes from incomplete and possibly inaccurate geological information

**Outcome**

Communicate effectively.

**Marketable Skills**

- Prepare and widely circulate well-written and well-structured written documents that contain sound reasoning and robust conclusions based on geological principles
- Deliver oral presentations and answer technical questions in plain language, in which geological information is motivated, described, interpreted, and from which compelling conclusions are carefully explained to the audience

**Outcome**

Develop clear research plans, conduct valid, data-supported, theoretically consistent, and appropriate venues to a range of audiences.

**Marketable Skills**

- Apply and further develop advanced principles of scientific uncertainty as they relate to geological hypothesis testing
- Combine geological and geophysical data to build and assess the implications of integrative models whose value exceed the sum of its components
- Execute robust and decisive tests of geological research hypotheses using advanced principles, data, and techniques

**Outcome**

Use appropriate technologies to communicate, collaborate, conduct research, and solve problems.
<table>
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<tr>
<th>Outcome</th>
<th>Teach and explain the subject matter in their discipline.</th>
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| Marketable Skills | • Use the full capabilities of commercial software packages to process, display and manipulate geological data and work with companies for their further development and refinement  
• Use advanced geological field and laboratory equipment and work with companies for their further development and refinement |
| Outcome | Choose ethical courses of action in research and practice. |
| Marketable Skills | • Be a role model in professional conduct in research and assume leadership roles of professional societies within geological sciences  
• Demonstrate exemplary behavior in balancing stakeholder, client and public interest as it pertains to geological investigations |