

UNIVERSITY OF ALASKA FAIRBANKS
 Student Learning Outcomes Assessment Plan
MS (Geological Engineering)
 College of Engineering and Mines
 September 2013

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
<p>MISSION STATEMENT:</p> <p>To develop professional expertise beyond the undergraduate program in mineral and energy exploration, evaluation, development and production; engineering site selection, construction and construction material production; and groundwater and geo-environmental engineering including geologic hazards assessment, through high quality education in Geological Engineering with an emphasis on Alaska, the North and its diverse peoples.</p>	<p>(a) An ability to apply advanced knowledge of mathematics and engineering sciences related to geological engineering.</p>	<p>ENTRY: GRE score.</p>	<p>The faculty will review the student's GRE score included in the student's application to the graduate program.</p>
	<p>(b) An in-depth knowledge in the areas related to geological engineering, particularly in the student's specialized field.</p>	<p>EXIT: Evaluation of the student's graduate research project/thesis and graduate comprehensive exam covering subjects of the required and technical courses by the graduate advisory committee.</p>	<p>The graduate comprehensive exam will be administered at least one semester before the student's thesis/project defense.</p>
	<p>(c) An ability to independently carry out a design or a research project.</p>	<p>Evaluation of the student's graduate research project/thesis.</p>	<p>The student's thesis or project report will be reviewed by the student's advisory committee during the student's last semester.</p>
	<p>(d) An ability to independently identify and solve engineering problems.</p>	<p>Same as (b)</p>	<p>Same as (b)</p>
	<p>(e) Demonstrate leadership ability, effectiveness in team work and ability of interacting with the industry.</p>	<p>Evaluation of the student's thesis or project and graduate comprehensive written exam.</p>	<p>The student's advisory committee will evaluate the student's thesis or graduate project. The graduate comprehensive written exam will be administered at least one semester before the student's thesis/project defense.</p> <p>During the student's tenure in the program, the faculty will monitor and evaluate the student's performance in research, teaching and communication or leadership as applicable.</p> <p>For a student who is working as a Research Assistant, an evaluation of their</p>

			<p>communication with the funding agency, progress and impact of their research and how well they work with the research team would be assessed.</p> <p>For a student who is working as a Teaching Assistant, an assessment of their teaching in addition to their research progress and communication would be used for evaluation.</p> <p>If students are members of student or professional organizations, then their leadership roles or contributions to the profession will be assessed and evaluated.</p> <p>For students who fund their own studies, assessments will be based on their research progress, communication skills and leadership.</p>
	(f) Communication skills.	<p>Evaluation of student's in-class oral presentations, publications, and presentations at professional conferences and meetings.</p>	<p>The student's advisory committee will review the student's thesis/project report and other publications. The committee will also evaluate the student's communication skill during the final oral exam (thesis/project defense).</p>