UNIVERSITY OF ALASKA FAIRBANKS

Student Learning Outcomes Assessment Plan

Bachelor of Science (Mining Engineering)

College of Engineering and Mines

May 2018

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
MISSION STATEMENT: As the nation's northernmost accredited Mining Engineering Program, our mission is to advance and disseminate knowledge for exploration, evaluation, development and efficient production of mineral and energy resources with assurance of the health and safety of persons involved, and protection of the environment, through creative teaching, research, and public service with an emphasis on Alaska, the North, and its diverse peoples.	Meet Student Learning Outcomes as defined for ABET accreditation. See note below & next page. NOTE: 1. The ABET outcomes will change nationally in Fall 2018. The past and future outcomes are provided. 2. The communication outcomes defined for ABET (past or future) meet the requirements of the UAF communication plan.	• Courses assessments • Review of senior project by professionals • Program Review by Faculty • Student survey • Exit Interview of Graduates	• Course assessment occurs every semester by individual faculty • The senior project is presented to Alaska Miners Association members each year. Responsible faculty organizes the presentation. • Program faculty review the program annually • Students are surveyed for course & program assessment as needed • Exit interviews are conducted with graduating seniors.
	To graduate competent engineers who will be: • employed in the mineral and energy industries • solving problems germane to Alaska • professional and understand the need to stay technically current	• Placement • Alumni Survey • Employer Survey • Industrial Advisory Board • FE exam pass rate	• Department monitors placement • Alumni & employer surveys are done once every few years • Program advisory board meets once a year.

Submitted by:

The 12 ABET Student Learning Outcomes (A through L) assessed in the last cycle are listed below:

Item	Outcomes
A	An ability to apply knowledge of mathematics, science and engineering.
B	An ability to design and conduct experiments, as well as to analyze and interpret data.
C	An ability to design a system, component, or process to meet desired needs within realistic constrains such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
D	An ability to function on multidisciplinary teams.
E	An ability to identify, formulate, and solve engineering problems.
F	An understanding of professional and ethical responsibility.
G	An ability to communicate effectively.
H	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
I	A recognition of the need for and an ability to engage in lifelong learning.
J	A knowledge of contemporary issues.
K	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
L	A knowledge of unique engineering and environmental issues in the arctic and subarctic regions.

Submitted by:

The new ABET outcomes starting Fall 2018. These will be assessed in the future.

A	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
B	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 economicfactors
C	an ability to communicate effectively with a range of audiences
D	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
E	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
F	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
G	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Submitted by: