

UNIVERSITY OF ALASKA FAIRBANKS
Student Learning Outcomes Assessment Plan
BS – Mechanical Engineering
College of Engineering and Mines (CEM)
May 7, 2021

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
MISSION STATEMENT: To offer the highest quality, contemporary education at the undergraduate and graduate levels and to perform research appropriate to the technical needs of the State of Alaska, the nation and the world GOAL STATEMENT: - To offer a Mechanical Engineering program designed to prepare for its graduates for careers at the professional level; - To provide continuing educational opportunities for graduate engineers; - To serve as a resource of technical knowledge for the state as well as the nation.	<i>Students will be able to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (ABET Student Learning Outcome #1)</i>	<i>Faculty Course Assessment Reports (FCAR)</i> - FCAR are completed on a 2-year rotating cycle. - FCAR use targeted assessment tools (e.g. exam problems) to assess student performance. <i>Senior capstone design projects reports.</i>	<i>FCAR generated on a two-year rotating cycle by faculty responsible for the course and collected by the ABET coordinator.</i> <i>FCAR results evaluated by entire faculty in department meetings, and summarized by the ABET coordinator.</i> <i>Collect capstone projects each year by the instructor.</i>
	<i>Students will be able to communicate effectively, participate on multi-disciplinary teams, and design systems under realistic constraints.</i>	<i>Senior capstone design course.</i> <i>Each student must contribute to written progresses reports, and a final report.</i> <i>Each student must contribute to the final oral presentation to a public audience.</i> <i>Each senior capstone design team creates a 3-min video summarizing this project to a general audience (e.g. Youtube)</i>	<i>Final oral presentations assessed by the Mechanical Engineering faculty in charge of the course, and final reports are assessed by the design project faculty adviser/mentor.</i> <i>Videos are collected and assessed by the instructor of record for the design course</i>
	<i>Students will develop the skills necessary to compete in both the local and global engineering economy.</i>	<i>Senior exit survey.</i>	<i>Student exit surveys are conducted, collected, and summarized yearly by the department chair.</i>
	<i>Students will have an understanding of professional and ethical</i>	<i>Student assessment via FCAR.</i>	<i>FCAR generated on a two-year rotating cycle by faculty</i>

Submitted by:

	<i>responsibility, and a knowledge of contemporary issues.</i>	<i>National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) Exam</i>	<i>responsible for the course. FCAR results evaluated by entire faculty in department meetings.</i> <i>FE exams results are initially compiled and analyzed by Prof. David Denkenberger (Mechanical Engr.)</i> <i>Summaries are then provided to, and discussed by the entire faculty at end-of-year accreditation meetings. Plans for initiating any changes (if necessary) or determined for the subsequent academic year</i>
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