**UNIVERSITY OF ALASKA FAIRBANKS**  
**Student Learning Outcomes Assessment Plan**  
**Masters of Science in Petroleum Engineering**  
**College of Engineering and Mines (CEM)**  

**Mission Statement**  
The mission of the Petroleum Engineering Program is to provide its students with quality education and training in the field of Petroleum Engineering through effective teaching, research and public service, with emphasis on Alaskan petroleum resources.

**Vision Statement**  
To be the foremost PE program dedicated to the creation of innovative solutions for the extraction and the sustainable development of energy resources in the circumpolar North and beyond.

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<th>Intended Objectives/Outcomes</th>
<th>Assessment Criteria and Procedures</th>
<th>Implementation (what, when, who)</th>
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| Attract and admit high caliber students to the MS program in Petroleum Engineering here at UAF | **Instrument:** GRE scores and GPA  
**Rubric:** GPA and GRE scores meet certain minimum standards  
**Min. standard:** UG GPA>3 and GRE Quantitative score > 155 | **What:** Ensure admitted students are high-caliber  
**When:** During the admissions process  
**Who:** Faculty |
| Graduate students in a timely manner | **Instrument:** # of years to graduation  
**Rubric:** Track # of semesters it takes students to graduate and ensure 80% of the students are meeting this minimum standard.  
**Min. standard:** Maximum # of semesters to graduate is 6 excluding summer semesters | **What:** Ensure students graduate on time  
**When:** The time of the students’ defense  
**Who:** Faculty |
| Technical rigor of the students’ project or thesis | **Instrument:** Thesis/project defense results and/or conference/journal publications  
**Rubric:** A certain percentage should pass their project or thesis defense and a certain percentage of the project/thesis work should result in conference or journal manuscripts/publications (except for the long distance students)  
**Min. standard:** 50% of the thesis/project submissions should result in a conference or journal manuscripts submissions | **What:** Ensure students are technically proficient  
**When:** Within a year of students’ defense/ graduation  
**Who:** Faculty/Student advisory committee chair |

Submitted by: Dare Awoleke and Shirish Patil
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| Continually challenge students with new ideas and course work | **Instrument**: Number of new course offerings in review period  
**Rubric**: New course offering during the review period  
**Min. standard**: At least one new course offering during the review period | **What**: Ensure students are continually being exposed to new ideas  
**When**: During the review period  
**Who**: Faculty |
| Demonstrate a broad appreciation of the discipline of petroleum engineering | **Instrument**: A comprehensive exam during the MS thesis/project defense that will test the three broad technical areas in petroleum engineering—drilling, production and reservoir engineering  
**Rubric**: To be developed  
**Min. standard**: To be developed | **What**: Ensure students demonstrate a broad appreciation of petroleum engineering  
**When**: During the thesis defense  
**Who**: Students’ advisory committee |