

COMMITTEE RECOMMENDATION FOR PETROLEUM ENGINEERING

STRENGTHS:

- The Petroleum Engineering (PE) program received a clean accreditation report in fall 2018.
- This is the only “full-fledged” PE bachelors in Western North America.
- The program is NOT duplicated in UA system; it is the only PE department in Alaska.
- The program is critical to resource development in Alaska.
- High level of faculty research productivity.
- Strong donor & industry support and robust community engagement.
- Ongoing ~\$10M US DOE funded project ; \$500K Plains Carbon Dioxide Reduction (PCOR) project.
- Active student chapters of two professional societies, namely SPE and the American Association of Drilling Engineers (AADE).

WEAKNESSES:

- Accreditation could be at stake due to faculty attrition and low enrollment.
- Sharply declining enrollments, which is likely related to oil price drops.
- PE discipline “is at the mercy of commodity prices, i.e., crude oil, which are affected by factors such as supply-demand and also geopolitics.”
- Budget cuts have led to loss of faculty, which then leads to loss of enrollment.

OPPORTUNITIES:

- Alaska is a resource rich state - the critical nature of the Petroleum Engineering Department and the value it brings to the University and the State can be leveraged to increase revenue and stakeholder involvement.
- According to the program’s SWOT, there is a renaissance on the North Slope of Alaska in oil drilling and production.
- Opportunities exist for interdisciplinary collaborations across the campus; for example, with natural sciences and other engineering disciplines.
- Recruitment possibilities in Anchorage by offering PE in Anchorage should increase enrollments.

THREATS:

- Faculty attrition has led to loss of capacity and stability.
- Budget cuts, with more to come.
- Relative low number of students compared to other CEM programs.
- External threats: Climate Change and its political, environmental and societal ramifications on enrollment.

CENTRALITY TO MISSION:

- Alaska workforce development.
- Addresses UAF Core Themes of Educate & Engage.

- The department's mission statement aligns closely with the university's mission: *"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."*

INDICATORS OF QUALITY:

- High level of faculty research productivity.
- Many of the students and alumni (most of them well placed in the oil industry) have excelled in competitive student and other professional events, and have been recognized by numerous awards and recognitions.
- Graduates of the program typically join the resource industry, engineering consulting companies, or state or federal agencies.

COST-EFFECTIVENESS:

- ~4 FTEs for 83 students with an unrestricted salaries and benefits cost of approximately \$800,000

	MAJORS	DEGREES
Petroleum Engineering BS	FY15: 218/ FY19: 66	FY15: 20/ FY19: 17
Petroleum Engineering MS	FY15: 38/ FY19: 26	FY15: 8/ FY19: 6

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Petroleum Engineering BS:

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan (8 votes)	Develop detailed plan for recruiting and retaining students. Explore developing online courses and changing course schedules to meet students' needs.	One year

Petroleum Engineering MS:

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan (8 votes)	Develop detailed plan for recruiting and retaining students. Explore developing online courses for industry professionals.	One year