



Date: February 14, 2020

To: John Stalvey, Interim Provost

From: Kenrick Mock, Interim Dean, College of Engineering

Cc: Joey Yang, Professor & Department Chair, Program Committee Chair
Tom Ravens, Professor

Re: AY20 Expedited Program Review Findings

Program/s in this review: Civil Engineering (BS)

Specialized accrediting agency: ABET – Engineering Accreditation Commission (EAC)

Campuses where the program is delivered: UAA

Members of the program review committee:

- Joey Yang, Professor & Department Chair, Program Committee Chair, UAA
- Tom Ravens, Professor, UAA

Centrality of Program Mission and Supporting Role

The program meets UAA's mission to support workforce development in the high demand job field of civil engineering. Civil engineers are critical to develop Alaska's infrastructure, in sectors that include construction, transportation, water, environmental, and more. Survey data indicates that 70% of program graduates work in Alaska and the program has built many community and industry collaborations that revolve around research and capstone projects since the program's inception in 1983.

Program Demand (including service to other programs), Efficiency, and Productivity

Industry demand is very strong both within and outside Alaska. Together with UAF's graduates the number of civil engineers produced is less than the projected need for Alaska. The program also teaches courses required in the State of Alaska for professional licensure.

The number of majors has been steady at approximately 223 for the past three years, and up significantly from approximately 100 in prior years. SCH production is primarily from majors and has grown commensurately with enrollment. The number of degrees awarded has also grown, averaging 31 awards per year. These metrics indicate a healthy and sustainable program.

The program does have excess instructional staff capacity that has been directed toward research. The FTEF for 2017-2019 averages to 4.7 while the actual number of tenure-track faculty in the department is closer to 9. Nevertheless, the tuition revenue per SCH has trended close to the cost per SCH.

Classroom seat utilization is relatively strong at an average class size of 23.

Program Quality, Improvement and Student Success

The program has been continuously accredited by ABET since 1983 and the faculty participate regularly in program assessment. Students pass the FE exam above the national average and have performed well in national competitions. The program also implements high impact practices such as community-based capstone projects and undergraduate research experiences. The successful placement of graduates both in industry and in graduate programs is a strong indicator of the quality of the program.

Program Duplication / Distinctiveness

UAF has the only other CE program in the state. The faculty expertise at the two campuses complement rather than compete with each other through unique strengths in different areas. Additionally, the programs have been cooperating through shared distance courses. There is more demand for graduates in the State than is currently produced by UAA and UAF combined.

Commendations and Recommendations

The faculty are commended for offering a quality program over many years and for integrating community projects into the curriculum. Civil and environmental engineering graduates from UAA have made significant contributions to the infrastructure of Alaska and all evidence points to the state needing more engineers in the future. The program should continue to seek methods of continuous improvement, collaborate with UAF to best utilize our respective expertise, and operate in a cost-effective manner.

Decision: Continuation