



Date: February 14, 2020

To: John Stalvey, Interim Provost

From: Kenrick Mock, Interim Dean, College of Engineering

Cc: Frank Moore, Professor & Department Chair, Program Committee Chair
Shawn Butler, Term Assistant Professor
Christoph Lauter, Assistant Professor
Sebastian Neumayer, Assistant Professor
Frank Witmer, Assistant Professor

Re: AY20 Expedited Program Review Findings

Program/s in this review: Comp Science (BA-BS)

Specialized accrediting agency: ABET – Computing Accreditation Commission (CAC), BS degree

Campuses where the program is delivered: UAA

Members of the program review committee:

- Frank Moore, Professor & Department Chair, Program Committee Chair, UAA
- Shawn Butler, Term Assistant Professor, UAA
- Christoph Lauter, Assistant Professor, UAA
- Sebastian Neumayer, Assistant Professor, UAA
- Frank Witmer, Assistant Professor, UAA

Centrality of Program Mission and Supporting Role

The program meets UAA's mission to support workforce development for the high demand job field of computing professionals. In Alaska, nationally, and globally there is strong demand for computer scientists. EMSI data indicates that 75% of program graduates work in Alaska and the program has built many community and industry collaborations that revolve around research, internships, and capstone projects. ConocoPhillips recently donated a high-performance computing cluster to the department.

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

Industry demand is very strong both within and outside Alaska.

The number of majors has steadily grown from 200 to 260 in 2019. SCH production is primarily from majors and has also grown. The program has experienced growth even while there has been a downturn in enrollment overall at UAA. For the number of majors, the number of degrees awarded is low – less than 10% of the number of majors. The program recognizes the high attrition in the introductory course sequences and has just completed steps to revise the curriculum to address the issue.

The program has little to no excess instructional staff capacity due to the relatively small number of faculty to offer the program. This in turn has helped the program be cost effective in instruction delivery; the tuition revenue has been within 10% of instructional cost in recent years.

Classroom seat utilization is relatively strong at an average class size of 19.

The program no longer provides service courses to CAS, but does provide some service courses to other engineering programs. However, service course opportunities do exist with general interest in computer programming, and with rising interest in areas such as data science and cybersecurity.

Program Quality, Improvement and Student Success

The program has been continuously accredited by ABET since 2011 and the faculty participate regularly in program assessment. The program has been revised several times to meet changing demand and changing technologies. The program also implements high impact practices such as internships and undergraduate research experiences that are integrated into the curriculum. The successful placement of graduates is a strong indicator of the quality of the program.

Program Duplication / Distinctiveness

UAF has the only other CS program in the state and also has a relatively small number of faculty. The faculty expertise at the two campuses complement rather than compete with each other, and 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 being at the forefront of sharing core courses by distance with UAF's CS department – the department has the strongest enrollments in shared courses on both campuses and has identified and begun finding solutions to issues that need to be addressed to increase course sharing in CoEng in general. Some course sharing may also be possible with UAA's MIS program. Finally, the program is commended on maintaining a quality program with a relatively small number of faculty members.

Decision: Continuation