

COMMITTEE RECOMMENDATION FOR ELECTRICAL AND COMPUTER ENGINEERING

STRENGTHS:

- Programs are well integrated with an active and experienced faculty.
- Lab heavy curriculum that prepares students for work in industry.
- Pass rate for the Fundamentals of Engineering exam are 90%.
- Location in Alaska provides unique skill sets and experience.
- Diverse student population.
- 95% of graduates find employment within a year of graduation across the state, nation and world; 65% of them stay in Alaska.
- Programs are critical for the state economy.
- Faculty lead and support research in which students actively engage.
- Students and faculty engage in professional engineering extracurricular activities.

WEAKNESSES:

- Incompatible course blocks limit opportunities for sharing courses with UAA.
- Large number of concentrations leads to small upper-level class sizes.
- Small number of faculty leads to infrequent upper division classes.
- Advisors from outside the department do not know optimal course sequencing, which can cause problems for students.

OPPORTUNITIES:

- Increase enrollment through growing distance learning opportunities.
- Department is developing a plan to reduce undergraduate degree options.
- More effective advertising of the program.
- Increased funding for research that engages undergraduate students.

THREATS:

- The ECE department has lost faculty, making it challenging to teach sufficient material to maintain ABET accreditation with a large number of required courses.
- Budget cuts, which lead to a decrease in faculty and decreased enrollment.
- Low level of collaboration with UAA faculty.

CENTRALITY TO MISSION:

- Uniquely equipped to conduct Arctic based research.
- The program is providing trained workforce for the state economy.

INDICATORS OF QUALITY:

- High demand for graduates by industry.
- High pass rate for FE exam.
- Successful ABET reviews.
- Faculty are very productive in research.

COST-EFFECTIVENESS:

- Faculty are successful in securing external funding .
- Computer engineering degree requires only one course in addition to existing courses in Electrical and Computer Science.
- ~5 FTES for 149 students with a salaries and benefits cost of approximately \$1.2 million.

	MAJORS	DEGREES
Computer Engineering BS	FY15: 46/ FY19: 43	FY15: 3/ FY19: 2
Electrical Engineering BS	FY15: 105/ FY19: 90	FY15: 10/ FY19: 7
Electrical Engineering MS	FY15: 17/ FY19: 16	FY15: 3/ FY19: 6

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Computer Engineering BS :

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan (7 votes, 1 abstention)	Develop plan to address low graduation rates	One year

Electrical BS :

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan (7 votes, 1 abstention)	Develop plan to address low graduation rates; continue plan to streamline curriculum	One year

Electrical Engineering MS :

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation (7 votes, 1 abstention)		