

# Student Learning Outcomes Assessment Summary

## **Electrical Engineering, MSEE**

*College of Engineering and Mines*

**AY 2016-17 and 2017-18**

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### **1. Assessment information collected**

During these two academic years (2016-17, 2017-18), we collected data using 2 direct assessment mechanisms and tracked the time to graduation. Assessment information is reported for 9 MSEE students that graduated in this two year period.

1) Comprehensive Exam:

(a) Pass rate:  $9/9 = 100\%$  (2 students required 2 attempts to pass the exam and 1 student required the maximum 3 attempts to pass the exam.)

(b) Breadth of knowledge (Comprehensive Exam Results on 1-5 scale): 3.22

2) Graduate Committee Evaluation Results (1-5 scale):

a. Math/Sci/Engr	3.72
b. Critical Thinking	3.72
c. Communication	3.61
d. Engineering Tools	3.95
e. Guided Research	4.09
Overall Average	3.76

3) Time to Graduation: A number of students left UAF after finishing classes with job commitments, internships etc. Some filed formal leave of absences and some continued to register for a few thesis credits. Some students time working on their theses while away. I have calculated time to graduate using the data on semester when a student was admitted to UAF and when the student graduated. These times to graduate for nine students are: 3, 3.5, 3, 3.5, 2, 2, 2.5, 6, 4 years, for an average of 3.27.

### **2. Conclusions drawn from the information summarized above**

With a small number of students, we want to exercise caution when attempting to draw general conclusions, and especially with recommending curricular changes. Though all nine students passed the comprehensive exam, three students required more than one attempt. This was probably due to lack of background of certain

students on some of the comprehensive exam topics. Overall as group their evaluations of ~3.6-4.0 out of 5 in five areas of assessment are commendable. Three students finishing in ~2 years were high achievers and remaining were rather slow in their progress towards their degree. A number of these students left UAF before finishing their thesis work with job commitments, etc., and so the time to graduation number is a bit questionable. With that caveat, the time to graduation is also quite reasonable.

### **3. Curricular changes resulting from conclusions drawn above**

Overall our program is strong and there were no significant curricular changes resulting from the above conclusions. However, as in the past, graduate committee evaluations showed relatively poor scores on communication skills of international students. Faculty will continue to help international students in improving their written reports and oral presentations by providing feedback on written and oral skills as well as on technical matters.

### **4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting**

The entire ECE department faculty reached the above conclusions and resulting no-curricular changes. The ECE faculty includes:

Bill Bristow <bill.bristow@gi.alaska.edu>  
Denise Thorsen <denise.thorsen@alaska.edu>  
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### **5. Has your SLOA plan been updated to include assessment of the program's Communication Plan, as required by Faculty Senate motion?**

Not required on graduate degrees; Plan is sufficient as is.