

# Student Learning Outcomes Assessment Summary

## *Electrical Engineering, BSEE*

*College of Engineering and Mines*

AY 2012-13 and 2013-14

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### 1. Assessment information collected

During these two academic years, we collected data using 3 direct assessment mechanisms and 1 indirect method.

- 1) All 11 ABET a-k outcomes were assessed by the faculty teaching the senior capstone design projects on a 1-5 scale. The results are shown for 17 students in this 2 year period.

a=3.86, b=3.46, c=3.95, d=4.02, e=3.96, f=3.88, g=3.96, h=3.82, i=3.77, j=3.85, k=3.95

Only the second value, representing outcome b is below the 3.5 threshold.

- 2) ABET outcomes a, b, e and k were assessed by faculty in their FPAR (Faculty Performance Criteria Reports). Results are given in terms of the percentage of students that exceeded the performance threshold in each of the outcomes.

a = 85%, b = 79%, e = 85%, k = 92%

Each of the outcomes is above the threshold value of 75%

- 3) The nationally normed FE exam was taken by graduating seniors. The results of the FE exam over the last 2 years are 86% of 21 UAF EE students passed compared to the national average of 73%.

- 4) All 11 ABET a-k outcomes were indirectly assessed by the seniors. The results (in a 1-5 scale) are shown for xx students in this two year period.

a=4.4, b=4.2, c=3.8, d=4.4, e=4.2, f=4.5, g=3.8, h=4.0, i=4.1, j=4.1, k=4.0

None of the values fell below the 3.0 threshold.

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

In the senior capstone courses, faculty noticed some were not quite performing at the expected level in outcome b – an ability to design and conduct experiments, as well as to analyze and interpret data, with an average rating of 3.46. It is interesting to note that these students rated themselves as a 4.2 on this same outcome. Faculty assessing outcome b using the coursework rated students with an average rating of 79%.

Given that only one of the metrics used fell below the threshold of 3.5, and that value was only slightly below at 3.46, we will take no actions at this time on addressing outcome b, other than keep a close eye on it during the next assessment cycle.

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

There were no curricular changes resulting from the above conclusions.

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

The ECE department faculty reached the above conclusions and resulting curricular changes.