

Student Learning Outcomes Assessment Summary

Computer Engineering, B.S.

College of Engineering and Mines

AY 2016-17 and 2017-18

Submitted by: Dejan Raskovic

Contact Information: draskovic@alaska.edu 474-5256

Date: May 8, 2018

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 member teaching the senior capstone design course on a 1-5 scale. The results are shown for this 2 year period.
2017-18 weighted average (3 students): a=4.08, b=4.08, c=3.92, d=3.83, e=4.08, f=4.08, g=4.50, h=4.33, i=4.00, j=4.17, k=4.17
None of the values fell below the 3.0 threshold in this period.
- 2) ABET outcomes a, b, e, and k were assessed in 2016-17 and outcomes c, d, f, g, h, i, and j were assessed in 2017-18 by faculty in their FPARs (Faculty Performance Indicator Assessment Reports). Results are given in terms of the percentage of students that exceeded the performance threshold in each of the outcomes.
a=83%, b=100%, c=100%, d=84%, e=100%, f=100%, g=100%, h=100%, i=100%, j=100%.
Each of the outcomes was above the threshold value of 75% in this period.
- 3) The nationally normed FE exam is taken by all graduating seniors. To avoid fluctuations we report cumulative results over the last 5 years. The current running average of CpE students passing the FE exam is 88% (7 out of 8). The latest available national average was 71%.
- 4) All 11 ABET a-k outcomes were indirectly assessed by the seniors in a senior exit survey. The results (in a 1-5 scale) are shown for 5 students in this two year period.
2017-18 weighted average (3 students): a=3.33, b=3.67, c=3.33, d=4.33, e=3.67, f=4.33, g=4.67, h=4.67, i=4.33, j=3.00, k=4.00
None of the assessed values for each of the a-k outcomes were below the 3.0 threshold for the assessed period.

2. Conclusions drawn from the information summarized above

None of the direct assessments of outcomes (senior capstone design, FPAR, and FE) were below the threshold. Because the sample was small, we will continue to monitor student performance and reevaluate the results after the next assessment cycle.

On the senior exit survey, which is our indirect assessment method, none of the outcomes were below the 3.0 threshold. However, outcome j – a knowledge of contemporary issues, was at exactly 3.0. Because none of our direct assessment methods indicated a problem with this outcome, the faculty decided to take no actions related to contemporary issues, other than to continue monitoring.

3. Curricular changes resulting from conclusions drawn above

Because the outcome j still has the lowest score on the senior exit survey, showing that at least some students struggle with understanding that they are taught contemporary material, we will continue to emphasize that most of the issues introduced in our classes are contemporary issues. For example, for the past four years, students in the senior capstone design course were working on projects related to NASA's future space missions, defined and mentored by NASA scientists.

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 minor curricular changes. The ECE faculty includes:

William Bristow <wabristow@alaska.edu>
Michael Hatfield <mchatfield@alaska.edu>
Charlie Mayer <cemayer@alaska.edu>
Dejan Raskovic <draskovic@alaska.edu>
Vikas Sonwalkar <vssonwalkar@alaska.edu>
Stephen Stephens <swstephens@alaska.edu>
Denise Thorsen <denise.thorsen@alaska.edu>
Richard Wies <rwwiesjr@alaska.edu>

5. Has your SLOA plan been updated to include assessment of the program's Communication Plan, as required by Faculty Senate motion?

Yes.