

Student Learning Outcomes Assessment Summary

Engineering, PhD *College of Engineering and Mines* **AY2012-13 and AY2013-14**

Submitted by: Joe Hawkins
Contact Information: x5206
Date: May 16, 2014

1. Assessment information collected

The Engineering Ph.D. is a diverse program with 10 approved concentration areas within the 6 CEM engineering departments.

The end of the current reporting period represents the 12th year since this program enrolled its first student in 2002. Sixty-seven students have entered the program during that period, including:

25 students that graduated (37.3%),
26 students that are currently active (38.8%), and
16 students that left the program (23.9%)

The average time to complete the degree over this 12-year period is 3.9 years and the average graduation rate is 2.1 students per year.

During the current 2-year reporting period (Fall 2012 to Spring 2014):

14 new students entered the program
(6 CivE, 1 CompE, 1 ElecE, 4 MechE, 1 MinE, and 1 PetE)

4 of the new students include co-chairs at UAA under the provisions of UAF's policy for collaborative Ph.D. programs.

4 students graduated during the current reporting period:
(1 CivE, 1 EnvE, 2 ME)

Assessment data collected includes the pass rate of the comprehensive exam and the initial employment placement of graduates. We are not aware of any Engineering PhD students that have failed the written comprehensive exam during the current reporting period.

Of the four graduating students during the current reporting period, 2 are now university faculty members and 2 are now in post-doctoral positions.

2. Conclusions drawn from the information summarized above

In previous years, many of the graduates have pursued non-academic careers in industry or government agencies. The past two years are unique in that all of the graduates have moved into academic positions.

Given the extremely small number of students in this program, and the diversity of their programs, we have not implemented the survey of the 3-year and 6-year graduates in the original assessment plan. Also, we have not implemented a review of research publications of the graduates after graduation, since many of the past graduates are working for industry or government agencies that do not encourage (or actively discourage) publication.

The current assessment plan is not well matched to the diversity of this program. We have submitted a revised assessment plan to be implemented starting in Fall 2014 that will be more effective for this small and diverse program that averages 2 graduates per year.

The Engineering PhD program continues to provide an important capability for providing students with research opportunities and training within CEM, and is helping to grow the infrastructure at UAF that may warrant dedicated doctoral programs within select CEM departments in the future.

3. Curricular changes resulting from conclusions drawn above

Due to the diversified nature of this program (10 distinct concentration areas, with many sub-disciplines within those areas) and the small number of students, there is no curriculum that is common to a majority of students in this program. There are also no courses within CEM that are specifically offered to only doctoral students, except for the necessity of offering individual study courses as needed to provide the training in specific areas required by each student on a case-by-case basis. No curricular changes were made based on the conclusions drawn above.

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

Joe Hawkins, Chair, CEM Engineering Admissions Committee
Charles Mayer, CEM Associate Dean of Academics