

#4. Executive Summary: Undergraduate Program Assessment: Alternative Delivery

Course: Phys 110 **Alternative Format:** Other **Explain "Other" if selected:** Dual Credit

Department: Natural & Computer Science **Date:** 9/9/16

Members (must include more than course instructor only) **involved with analysis of artifacts:** Kyle Johnson, John Jurchen, Kristy Jurchen, Tim Huntigton, Connie Callahan, Jen Freund

See #3 Assessment Plan: Alternative Delivery: Student Outcomes for: a) *Course requirement evaluation*; b) *Student Outcome*; c) *Question(s)*; e) *Methodology*

Analysis of artifacts:

1). Student Outcome: **PERFORMANCE CRITERIA*** - *How was data analyzed? (attach rubrics/scoring tools if used).* Scores (means and distributions from a 40 question multiple choice final exam) were analyzed.

2). **COMPARABILITY** – *How did you determine if the outcomes of the traditional and alternative delivery modes were comparable? (note "na" if delivery modes were not compared).* Scores from the various dual credit sites were compared with each other and with scores from when the course was last taught on the Seward campus.

Summary of RESULTS*:

1). *Restate the assessment question(s) (from the Assessment plan):* Are students able to analyze natural situations and communicate understanding and information about the world in verbal, graphical, and analytical languages.

2). *Summarize the assessment results. A narrative summary is required. Charts, tables or graphs are encouraged but optional.* The averages for the three schools teaching Phys 110 were: DC1 88.4%, DC2 76%, DC3 84%. These results are very similar to each other, and to past years. They compare favorably to the last round of scores from when Phys 110 was taught on the Seward campus, when the average was 62%. (The format of this document will not allow pasting a chart into the text area provided.)

3). **INTERPRETATION*** - *Discuss how the results answer the assessment question(s).* The assessment instrument consists of 40 multiple choice questions from the test bank for the standard textbook for the course. The questions require students to analyze physical situations and answer questions about them from a physics perspective. Several of the questions involve analyzing graphs of motion or other types of graphs, and many involve using equations and calculations. The fact that students average over an 80% on this exam is solid evidence that students are indeed able to analyze natural situations and to communicate their understanding.

4). *Observations made that were not directly related to the question(s). (i.e. interrater reliability of the scoring tool was low)* The averages for most of the schools and the aggregate average have been increasing over the years. This may be due to teachers knowing what is expected and doing a better job of teaching the objectives. Alternatively it could mean teaching to the test. Not every school has improved every year, so there is enough variability that the scores are still believable, but it might be good in the future to vary the exam questions somewhat.

5). **How did the outcomes of the traditional and alternative format analysis compare?** (note "na" if delivery modes were not compared). See #3. The scores from the dual credit sites are similar to and in fact better than those scored by the students in the course offered on Seward's campus in the spring of 2014.

Sharing of Results:

When were results shared? Date: June 6, 2016

How were the results shared? (i.e. met as a department) Met as a department

Who were results shared with? (List names): Rob Hermann, Brent Royuk, John Jurchen, Kristy

Jurchen, Tim Huntington, Kyle Johnson, Connie Callahan, Jen Freund

Discussion of Results –Summarize your conclusions including:

1. **ACTION***- *How will what was learned from the assessment impact the alternative format teaching of this course starting the next academic year?* Since the dual credit students are demonstrating admirable mastery of the concepts, we will try not to do too much to change this.

2. **IMPACT***- *What is the anticipated impact of the **ACTION*** on student achievement of the learning outcome in the next academic year?* Hopefully it will not deter from the learning that students are demonstrating.

3. **BUDGET IMPLICATIONS** – *Indicate budget requirements necessary for the successful implementation of the **ACTION*** (i.e. an additional staff person, new equipment, additional sections of a course).* None

Submitted via email to Assessment Committee Chair by: Rob Hermann

Reviewed by the Assessment Committee (date): 9/16/16

Submitter notified/additional action needed: na

BUDGET IMPLICATIONS – Assessment Committee Chair notified appropriate Dean: na

Approved & Posted to Assessment site: 9/16/16