#### 2023 – 24 Alternative Delivery Executive Summary

Submit to the BlackBoard Assessment Site.

**Department:** Natural and Computer Science **Date:** 6/11/24 **Course(s):** Chem 115

Alternative Format(s) – select as many as are applicable: Dual Credit Select Select

**Members** (must include more than course instructor only) **involved with analysis of artifacts:** Kristy Jurchen, Robert Hermann

# See Alternative Delivery Assessment Plan 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). The scores on the multiple-choice American Chemical Society (ACS) First Semester General Chemistry final exam were gathered from all instructors and averaged separately for the on-campus and Dual Credit students.
- 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). If the average scores are similar between the Dual Credit and on-campus students, or if the Dual Credit students outperform the on-campus students, the outcomes are considered to be comparable.

### **Summary of RESULTS\*:**

- 1). Restate the assessment question(s) (from the Assessment plan): Are students able to understand and apply the general principles of chemistry?
- 2). Summarize the assessment results. A narrative summary is required. Charts, tables or graphs are encouraged but optional. The historical average score for on-campus students is 36.3 points, with a standard deviation of 12.5 points. The Dual Credit student scores, on average, exceed the on-campus CUNE students, with an overall average score of 41.7 and a standard deviation of 10.9. The individual school averages were 39.0, 39.5, 43, 37.6, 44.5, and 56.5 points.
- 3). **INTERPRETATION\*** Discuss how the results answer the assessment question(s). The national average score on this version of the ACS exam is 40.73 points out of 70, with a standard deviation of 11.11 points. This year, the Dual Credit scores were slightly above the national norms, continuing to show improvement from classes taught during the pandemic. The Dual Credit student scores, on average, exceed the on-campus CUNE students. Two schools' scores were not available at reporting time, but both of those schools have historically performed better than the on-campus students.
- 4). Observations made that were not directly related to the question(s). (i.e. interrater reliability of the scoring tool was low)
- 5). How did the outcomes of the traditional and alternative format analysis compare? The Dual Credit scores were higher than the on-campus scores, on average.

**Sharing of Results:** When were results shared? Date: June 11, 2024 How were the results shared? (i.e. met as a department) via email Who were results shared with? (List names): Robert Hermann, Kyle Johnson, Raegan Skelton

## 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? The Dual Credit instructors have been successful in teaching their students the general principles of chemistry. No adjustment will be imposed on the Dual Credit instructors.
- 2. **IMPACT\*-** What is the anticipated impact of the **ACTION\*** on student achievement of the learning outcome in the next academic year? We expect the outcome to be similar next year.
- 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).

Submitted by: Kristy Jurchen Assessment Committee Reviewed (date): 6/24/24

Submitter notified approval/additional action needed: Approved

BUDGET IMPLICATIONS - Assessment Committee Chair notified appropriate Dean: None