

#2. 2017 – 2018 Executive Summary: Undergraduate Program Assessment:

Student Outcomes – Gen Ed

Department: Mathematics Date: 5/11/2018
Members involved with analysis of artifacts: Brian Albright and Edward Reinke
See Undergraduate Program Outcome Assessment Plan: Student Outcomes – Gen Eds for: a) Learning Outcome; b) Background; c) Question(s); d) Methodology
Analysis of artifacts: 1). PERFORMANCE CRITERIA* - <i>How was data analyzed? (attach rubrics/scoring tools if used).</i> A four point rubric was applied to each of the outcomes. The four categories are "Exceeds Expectations", "Meets Expectations", "Needs Improvements", and "Unacceptable".
Summary of RESULTS*: 1). <i>Restate the assessment question(s) (from the Assessment plan):</i> Are students able to effectively communicate a correct mathematical argument? 2). <i>Summarize the assessment results. A narrative summary is required. Charts, tables or graphs are encouraged but optional.</i> There were 20 students in Math 252 this past semester. At the time of assessment there were 19 students. Of these 19 students, 9 exceeded expectations and 6 met expectations. Overall they presented very effective proofs. Another 3 of the students were scored as needing improvements. There was a mixture of incorrect arguments as well as poor communication. Additionally, 1 of the students submitted unacceptable work. Compared to the previous year, a higher percentage (79% vs 68%) at least met expectations. 3). INTERPRETATION* - <i>Discuss how the results answer the assessment question(s).</i> We are very close to meeting our goal. Although we fell short of 80% the students who at least met expectations did very well on proof writing. There was still a significant gap between the students who at least met expectations and the other students in the class. 4). <i>Observations made that were not directly related to the question(s). (i.e. interrater reliability of the scoring tool was low)</i> The composition of the class was quite different than previous years. The percentage of elementary and middle level education students was unusually high. However the class performed quite well overall.
Sharing of Results: <i>When were results shared? Date:</i> 5/11/2018 <i>How were the results shared? (i.e. met as a department)</i> in person and electronically <i>Who were results shared with? (List names):</i> Brian Albright, Ed Reinke, Andy Langewisch
Discussion of Results – Summarize your conclusions including: 1. ACTION* - <i>How will what the department learned from the assessment impact:</i> a. <i>Teaching:</i> The instructor will provide additional feedback on proof writing in assignments. b. <i>Assignment/course:</i> Some students indicated submitting most of the assignments electronically caused difficulties. This will be monitored more closely next year. c. <i>Program:</i> no significant changes d. <i>Assessment:</i> continue with current assessment 2. IMPACT* - <i>What is the anticipated impact of the ACTION* on student achievement of the learning outcome in the next academic year?</i> At least 80% of students in Math 252 will be proficient in proof writing. According to our rubric they will meet or exceed expectations. 3. BUDGET IMPLICATIONS – <i>Indicate budget requirements necessary for the successful implementation of the ACTION* (i.e. an additional staff person, new equipment, additional sections of a course).</i> none
If action is taken – it is recommended that the same learning outcome and assessment plan be used for a second assessment cycle.
What assessment questions related to the learning outcome would the program like to investigate in the future? We will continue to monitor the outcome as a department as the GEN ED goal will change for 2018-19 academic year.

Submitted by:Andy Langeqisch **Assessment Committee Reviewed:** 5/17/18

Department Chair notified/additional action needed:Changes to future assessment question revised due to GEN ED goal changing.

BUDGET IMPLICATIONS – Assessment Committee Chair notified appropriate Dean: na**Approved & Posted to Assessment site:** 6/18