2020 – 21 & 2021 - 22 General Education Executive Summary

Department: Business and Mathematics   **Date:** 05/10/21

Members involved with analysis of artifacts: Marcus Gubanyi, Brian Albright

See General Education Assessment Plan for:
a) Learning Outcome; b) Background; c) Question(s); d) Methodology

Analysis of artifacts:

1). **PERFORMANCE CRITERIA*** *- How was data analyzed? (attach rubrics/scoring tools if used).*
Artifacts will be assessed using a 5-point Likert scale (attached), which assigns a value to whether students can demonstrate complete and correct knowledge.

Summary of RESULTS*:

1). Restate the assessment question(s) (from the Assessment plan):
Do students know basic facts, concepts and implications of Type I and Type II errors as they relate to hypothesis testing?

2). Summarize the assessment results. A narrative summary is required. Charts, tables or graphs are encouraged but optional.
A question on hypothesis testing errors from 20 student exams from two sections taught by Marcus Gubanyi were assessed. The scores of the results are: 6 students scored 5/5; 6 students scored 4/5; 2 students scored 3/5; 3 students scored 2/5; and 3 students scored 1/5.

3). **INTERPRETATION*** *- Discuss how the results answer the assessment question(s).*
The results show that the majority of students understand the concepts and implications of Type I and Type II errors very well. Only 3 students showed very little understanding (by scoring just 1 point) and no students scored 0.

4). Observations made that were not directly related to the question(s). (i.e. interrater reliability of the scoring tool was low) none

Sharing of Results: *When were results shared? Date*: 5/27/21
How were the results shared? (i.e. met as a department) emailed results to the rest of the department
Who were results shared with? (List names): Brian Albright, Ed Reinke, and Andy Langewisch

Discussion of Results –Summarize your conclusions including:

1. **ACTION*****-** *How will what the department learned from the assessment impact:*

a. Teaching: Continue teaching Type I and II errors and their implications.

b. *Assignment/course*: Add a few questions to assignments to assess understanding of Type I and II errors.

c. *Program:* No change needed.

d. *Assessment:* No change needed.

2. **IMPACT*****-** *What is the anticipated impact of the* **ACTION*** *on student achievement of the learning outcome in the next academic year?*   Students will better understanding Type I and II errors and their implications.

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

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? Click or tap here to enter text.

Submitted by: Marcus Gubanyi   **Assessment Committee Reviewed:** 7/6/2021

Department Chair notified – approval/additional action needed: Approved 7/6/2021

BUDGET IMPLICATIONS – Assessment Committee Chair notified appropriate Dean: na