

Assessment Report - Comprehensive Review

Program Assessment

Department:	Mathematics
Program:	Mathematics
Submitter:	Regina Hukill & Nigie Shi
Date Submitted:	Fall 2017

A. List your Program Learning Outcomes (PLOs)/Administrative Unit Outcomes (AUOs)

1. Demonstrate an understanding of functions from multiple perspectives.
2. Use numerical, graphical, symbolic, and verbal representations to solve
3. Use technology as a tool for exploring mathematical concepts.
4. Demonstrate an ability to work with mathematical abstractions, analyze
5. Synthesize mathematical knowledge.

B. How did your outcomes assessment results during the past three years inform your program planning? Use the bullet points below to organize your response.

- *All 16 of our math courses submitted Outcome Assessment Reports for Spring 2017 .
- *The Outcome Assessment Reports for Math B1A, Math B22, B60, Math B70 hybrid and online sections
- *We assessed SLO #2 using a common SLO assessment question for each course.

C. Describe how the program monitors and evaluates its effectiveness.

Each year in the spring we pick an SLO to assess for each course. All instructors for that course use the same question to assess the SLO, and then send the results to the Data Leader for that course. The Data Leader compiles the data and writes the Outcome Assessment Reports. The results are shared in the department so we can determine if there are any changes we need to make to improve student success.

D. Describe how the program engages all unit members in the self-evaluation dialog and process.

*The OAR results for each course are shared with the instructors. For example, Math B70 and Math B65 faculty met before Fall 2017 to discuss strategies to help students meet the expectations for SLO

#2.

*Our faculty are constantly collaborating on ways to improve instruction on SLO topics. This is an ongoing process that just doesn't happen once a year in the spring.

E. Provide recent data on the measurement of the PLOs/AUOs, as well as a brief summary of findings.

For Math B1A, we saw higher success rate in hybrid section than face-to-face section in Spring 2017. We will have the hybrid instructor share some tips with the face-to-face instructors.

F. How do you engage in collegial dialog about student learning outcomes?

Our department has a representative (Nigie Shi) in the Assessment Committee who will be the voice for the department to communicate our SLOs with the colleague.

Institutional Learning Outcomes:

Think: Think critically and evaluate sources and information for validity and usefulness.

Communicate: Communicate effectively in both written and oral forms.

Demonstrate: Demonstrate competency in a field of knowledge or with job-related skills.

Engage: Engage productively in all levels of society – interpersonal, community, the state and the nation, and the world.

G. What have the program's PLOs/AUOs revealed or confirmed in the past three years?

The courses we have that supports our A.S. Mathematics degree are Math B6A, B6B, B6C, B6D and B6E. In general, the PLOs for these courses have high success rates, though occasionally we do experience rates lower than we would like. It would appear the STEM Assistants we have used for these courses have a positive impact on improving success rates. We are concerned that since we no longer have the STEM grant funding that the lack of STEM Assistants could impact negatively on student success. We will actively seek funding from another source to provide this kind of tutoring for

H. If applicable, list other information, data feedback or metrics to assess the program's effectiveness (e.g., surveys, job placement, transfer rates, output measurements).

I. a. How do course level student learning outcomes align with program learning outcomes? Instructional programs can combine questions I and J for one response (SLO/PLO/ILO). b. How do the program learning outcomes align with Institutional Learning Outcomes?

All of our math courses have their SLOs mapped and aligned to corresponding PLOs, ILOs, and also Gen Ed Learning Outcomes where appropriate.

J. Include the activities your program is planning to close the achievement gaps during the next three years and the impact you expect from them.

*The MLC is currently redesigning it's hybrid courses including employing SI Leaders to have more high touch contact with the students.

*We opened five sections of Math B65 in Spring 2017, and due to increasing demand we are opening nine sections in Fall 2017. In Spring 2018 we will offer 13 sections of Math B65 to help non-STEM students shorten their pathway to the transfer level course of Statistics.