2012-2013 Annual Program Assessment Report

Please submit report to your department chair or program coordinator, the Associate Dean of your College and the assessment office by Monday, September 30, 2013. You may submit a separate report for each program which conducted assessment activities.

College: Science and Mathematics

Department: Mathematics

Program:

Assessment liaison: Vladislav Panferov

1. Overview of Annual Assessment Project(s). Provide a brief overview of this years assessment plan and process.

Revised department SLOs, studied the effects of introduction of Labs into the Calculus sequence.

2. Assessment Buy-In. Describe how your chair and faculty were involved in assessment related activities. Did department meetings include discussion of student learning assessment in a manner that included the department faculty as a whole?

Regular meetings with the Chair were used to determine the department assessment needs. Increasing faculty involvement in the assessment projects is a subject of future work.

3. Student Learning Outcome Assessment Project. Answer items a-f for each SLO assessed this year. If you assessed an additional SLO, copy and paste items a-f below, BEFORE you answer them here, to provide additional reporting space.

3a. Which Student Learning Outcome was measured this year?

SLO1: Demonstrate a solid foundation in mathematics which exhibits both breadth and depth of knowledge

3b. Does this learning outcome align with one or more of the universitys Big 5 Competencies? (Delete any which do not apply)

Critical Thinking
Written Communication
Quantitative Literacy
Information Literacy

It aligns directly with the following Fundamental Learning Competence:

Knowledge of Human Cultures and the Physical and Natural World: CSUN graduates understand the history and scope of human knowledge in the natural and social sciences and appreciate the diversity of aesthetic and cultural achievements throughout the world.

3c. Does this learning outcome align with Universitys commitment to supporting diversity through the cultivation and exchange of a wide variety of ideas and points of view? In what ways did the assessed SLO incorporate diverse perspectives related to race, ethnic/cultural identity/cultural orientations, religion, sexual orientation, gender/gender identity, disability, socio-economic status, veteran status, national origin, age, language, and employment rank?

N/A

3d. What direct and/or indirect instrument(s) were used to measure this SLO?

We used data on the numbers of students passing Calculus I (Math 150A) from Fall 2011 to Fall 2012.

3e. Describe the assessment design methodology: For example, was this SLO assessed longitudinally (same students at different points) or was a cross-sectional comparison used (Comparing freshmen with seniors)? If so, describe the assessment points used.

We separated pools of students who were required to enroll in the Labs (Math 150AL), and those who were not, and compared the passage rates in Math 150A to determine the relative effectiveness of the Labs. We analyzed data for the three semesters, from Fall 2011, to Fall 2012 to measure the trend. These data were compared with historical Calculus passage rates going back to 1999.

3f. Assessment Results & Analysis of this SLO: Provide a summary of how the results were analyzed and highlight findings from the collected evidence.

A total of 457 students were enrolled in Calculus I Labs (Math 150AL) in the period from Fall 2011 through Fall 2012. Of those, 281 passed the class (with a grade C- or better), making the success rate for these "at risk" students 61.5%. However, if we just consider the students who received credit for Math 150AL, their success rate is at 71.9%, almost identical to the rate for students who did not need to take the labs (71.5%). We presume that the students who did not complete the Lab have either dropped mid-semester, or have not attended enough classes to get the credit. The conclusion to be drawn from this, if students need to take the lab because of their grades in previous courses, and they take them seriously, their

chance of success in the class is the same as for the students who did not need to take the lab. From historical perspective, the passage rate for the "good" students who do not have the lab requirement is estimated at around 70%. The increased overall rate of success is likely entirely due to the "less prepared" students, who get the needed boost from the labs.

3g. Use of Assessment Results of this SLO: Describe how assessment results were used to improve student learning. Were assessment results from previous years or from this year used to make program changes in this reporting year? (Possible changes include: changes to course content/topics covered, changes to course sequence, additions/deletions of courses in program, changes in pedagogy, changes to student advisement, changes to student support services, revisions to program SLOs, new or revised assessment instruments, other academic programmatic changes, and changes to the assessment plan.)

Previous years: N/A.

The data about Calculus I Labs present a strong argument in favor of introducing Labs throughout the Calculus sequence (Math 250, Math 255 A/B) and align with the current work to revise the program for the Calculus level courses.

4. Assessment of Previous Changes: Present documentation that demonstrates how the previous changes in the program resulted in improved student learning.

N/A

5. Changes to SLOs? Please attach an updated course alignment matrix if any changes were made. (Refer to the Curriculum Alignment Matrix Template, `http://www.csun.edu/assessment/forms_guides.html`.)

Draft of revised Department of Mathematics SLO is attached. (To be approved by the curriculum committee with possible further revisions.)

Course Alignment Matrix is work in progress.

6. Assessment Plan: Evaluate the effectiveness of your 5 year assessment plan. How well did it inform and guide your assessment work this academic year? What process is used to develop/update the 5 year assessment plan? Please attach an updated 5 year assessment plan for 2013-2018. (Refer to Five Year Planning Template, plan B or C, `http://www.csun.edu/assessment/forms_guides.html`.)

In progress

7. Has someone in your program completed, submitted or published a manuscript which uses or describes assessment activities in your program? Please provide citation or discuss.

No.

8. Other information, assessment or reflective activities or processes not captured above.

N/A