FALL 2012 SLO/PLO ASSESSMENT REPORT

Date: December 24, 2012

Name of Person Reporting: Dr. Robert Smazenka, Tiran Mkrtchyan, Yoon Yun

Name of Department and/or Discipline: Mathematics/CSIT/Engineering

1. What courses/certificates/programs have you assessed this past semester?

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<thead>
<tr>
<th>Course</th>
<th>#SLOs</th>
<th>Assessed</th>
<th>SLO1</th>
<th>SLO2</th>
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</thead>
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<tr>
<td>Math 115</td>
<td>2</td>
<td>Fall 12</td>
<td>Fall 12</td>
<td>Fall 12</td>
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<tr>
<td>Math 260</td>
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<td>Fall 12</td>
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<td>Math 266</td>
<td>1</td>
<td>Fall 12</td>
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Note: The Math department has a common PLO for both degree programs: Associate in Arts in Mathematics & Associate in Science in Mathematics for Transfer.

2. Summarize the analysis of your assessment results for courses in your area.

SLO Assessment Analysis

Math 115
All 16 sections of Math 115 were required to take the department common final exam.

5 multiple choice questions were pre-selected for each SLO assessment from the common final.

SLO 1
For SLO1, 79% of the students who took the final earned at least 3 points out of 5 points, which is above the expected goal (70%) of the math department.

However, a large percentage of the students did not answer Question 3 correctly.

SLO 2
For SLO2, 80% of the students who took the final earned at least 3 points out of 5 points, which is above the expected goal (70%) of the math department.
Math 260
All 2 sections of Math 260 were required to answer the required questions for assessing SLO on their final exam. The instructors followed the rubric given for grading each question.

SLO 1

For question 1, 54% of the students earned at least 3 points out of 5 points, which is below the expected goal (70%) of the math department. Compared to the previous assessment on the same SLO topic, the results showed no improvement.

Based on the results shown, many students did not know how to manipulate trigonometric/algebraic expressions to solve the given equation.

SLO 2

For question 2, 48% of the students earned at least 3 points out of 5 points which was below the expected goal (70%) of the math department. However, this was a slight improvement over the last cycle results which had only 46% scoring 3 points or better out of 5 points.

Based on the results shown, many students in general had difficulty in analyzing and graphing a rational function that contains a hole.

PLO Assessment Analysis

In Fall 2012, the PLO was assessed for Math 266 to measure students understanding and progress for earning the AA degree in Mathematics and AS degree in Mathematics for transfer.

The only section of Math 266 (Calculus with Analytic Geometry II) was required to answer the questions for assessing PLO on the final exam.

Math 266

For the question 1, 100% of the students earned 5 points out of 5 points which was well above the expected goal (70%) of the math department. The results show that the students have a strong understanding of how to evaluate a definite integral using integration by parts method.

For the question 2, 71% of the students earned 3 points out of 5 points which was also above the expected goal (70%) of the math department. However, a significant portion (29%) lacked an adequate understanding of finding the radius and interval of convergence of infinite series.
3. How have the results of your assessments been shared and discussed among the members of your program? (Provide dates and any minutes of meetings.)

The results of SLO and PLO assessments have been posted in the online SLO system.

The results will be, first, discussed among full time faculty during January 2013 and will then shared to the other appropriate faculty before spring 2013 semester. Further implementations of the recommendations will be discussed in the department meetings.

4. How have the results of your assessments been shared and discussed with members of your advisory committee (if vocational program)?

There are no advisory committees for the Mathematics/CSIT/Engineering Department.

5. Based on the discussion and analysis of your assessment results, what changes have you made or do you plan to make? (Please provide dates, description of changes, and person responsible.).

Based on the assessment results, the math department plans to develop additional learning resources such as practice problems and solutions. The department will use Camtasia to produce video explanations on selected topics which will be posted on the department website. The department also plans to use online courseware more widely. A standard ready-to-use online course will be developed for instructors. In addition, Mathematica (computational software) will be used to help students to visualize and better understand mathematical concepts.

6. What resource requests are planned as a result of the assessments?

None.

7. Have the assessment results been posted on the online system?

Yes.

Written responses to these questions are due by Friday, December 21, 2012. These answers will be important evidence for accreditation.