2014-2017 Assessment Cycle

Assessment Findings

Assessment Measure Result per Assessment Measure

Program Level Outcomes

Student Learning Outcome

Outcome 1: Solving Equations
Solve application problems using mathematical models

Assessment Measure: PLO #1 (Math 3E): Solving Equations
Program level; Direct - Exam

Details/description of the assessment measure/method: The instructors of 3E will give a common test problem that targets this PLO. Once we have the question chosen, we will post it in taskstream.

Describe the standards for successful performance on this SLO: If at least 70% of the problem is done correctly, it is a success. Once we have a rubric, we will post it here.

What percentage of students should successfully meet the standards for this SLO?: We hope that at least 70% of the students in this class will successfully meet the standards for this PLO.

When do you plan to assess this outcome? (indicate the semester and year): Spring 2015

Supporting Attachments:

Math 3E PLO Rubric.pdf (Adobe Acrobat Document)

Assessment Measure Results for PLO #1 (Math 3E): Solving Equations

Summary of Assessment Measure Results: Students of both sections of Math 3E took the assessment. The instructors emailed back and forth looking for an appropriate problem that targeted this PLO. After they came to an agreement, they created a rubric and administered the problem to their students on an exam. We combined both sections' results in order to assess the student's knowledge for this PLO.

Results: Target Performance: Exceeded

What percentage of students successfully met the standards for this SLO?: A total of 27 students passed out of 33 or about 82% of the students passed

Was the assessment information sampled in any way? If so, please describe.: No - everyone who was enrolled at the end of the course took the assessment.

Outcome 2: Graphs
Interpret and/or create geometric representations of relations

Assessment Measure: PLO #2
Program level; Direct - Exam

Details/description of the assessment measure/method: An exam question (or questions) will be given to the 3F course. There is only one section. Once we have the question, we will attach it for your viewing pleasure.

Describe the standards for successful performance on this SLO: A student must receive at least 70% credit for the entire problem. Once we have a rubric for the question, we will uploaded it in taskstream.

What percentage of students should successfully meet the standards for this SLO?: We would like at least 70% of the class to successfully answer the exam question.

When do you plan to assess this outcome? (indicate the semester and year): Spring 2015

Supporting Attachments:

Math PLO #2 Math 3F Sp 2012.docx (Word Document (Open XML))
PLO #2 Question and Rubric

Assessment Measure Results for PLO #2

No Assessment Measure Results Added

Outcome 3: Numerical Analysis

Use numerical data to analyze functions

Assessment Measure: PLO #3

Program level; Direct - Exam

Details/description of the assessment measure/method: A common exam question will be given to the 3C courses. There are two sections. For details of the question, please refer to the attached document that includes both the question and rubric.

Describe the standards for successful performance on this SLO: A student must receive at least 70% credit for the entire problem. Please see the rubric for details on how it will be assessed.

What percentage of students should successfully meet the standards for this SLO?: We would like at least 70% of the class to successfully answer the exam question.

When do you plan to assess this outcome? (indicate the semester and year): Spring 2015

Supporting Attachments:

Math 3C PLO 3.pdf (Adobe Acrobat Document)
PLO #3 Question and Rubric

Assessment Measure Results for PLO #3

Summary of Assessment Measure Results: The instructors emailed back and forth to agree to use the same PLO question as in the past. Then, they administered the PLO question to their students at the end of the semester, on a test. We compiled their results to get the totoal percentage of students who successfully met the standards.

One of the instructors gave the two questions separately on different exams, which is why the first question is out of 52 students, while the second question is out of 47 students. Some students dropped or missed the later exam (question #2).

Results: Target Performance: Not Met

What percentage of students successfully met the standards for this SLO?: For Question #1, a total of 32 students passed out of 52 or about 62%

For Question #2, a total of 17 students passed out of 47 or about 36%.

Was the assessment information sampled in any way? If so, please describe.: Both sections of this course participated and they included results from all students who participated in the assessment.

One of the instructors gave the two questions separately on different exams, which is why the first question is out of 52 students, while the second question is out of 47 students. Some students dropped or missed the later exam (question #2).

ILO #2: Critical Thinking and Problem Solving

Assessment Measure: ILO #2 Assessment

Institution level; Direct - Other

Students will be able to think critically and solve problems by identifying relevant information, evaluating alternatives, synthesizing findings and implementing effective solutions.

Details/description of the assessment measure/method: We encouraged participation in an end of semester Math Fair for any students interested in competing for "mathy" prizes. Each student created a project (they could work in groups or individually) that related to their course of study for fall 2015. Their projects were graded on a rubric (included in the attachment) and a few math faculty got together to award prizes to students based on the rubric criteria. We had two instructors, Derrick Smith and Christine Will, go into other classrooms and solicit for participants. Derrick Smith was in charge of the transfer level courses (Calculus I and above), while Christine Will was in charge of Algebra and Statistics courses. They both created flyers to post and distribute to instructors and students.

Describe the standards for successful performance on this SLO: For this ILO, we really did not grade their projects individually, rather to "judge" the best projects. We awarded prizes to the following 3 categories: People's Choice, Best transfer level project and Best Algebra/Statistics project.
We did use the rubrics to judge them individually, however we did not assign grades to say that one project was "successful" or "not successful". All of the projects demonstrated excellent Critical Thinking and Problem Solving! ALL of them!

What percentage of students should successfully meet the standards for this SLO?: We did not assess in this way. But ALL of our students exceeded our expectations.

When do you plan to assess this outcome? (indicate the semester and year): Fall 2015

Supporting Attachments:

- Critical Thinking ILO Project.docx (Word Document (Open XML))
- Extra Credit for Discrete Math.pdf (Adobe Acrobat Document)
- Extra Credit for Linear Algebra.pdf (Adobe Acrobat Document)
- Flyer ILO Contest.docx (Word Document (Open XML))
- Math Fair Critical Thinking Rubric.docx (Word Document (Open XML))

Assessment Measure Results for ILO #2 Assessment

Summary of Assessment Measure Results: The results were unbelievable! Every student who participated created AMAZING projects, such as: facial recognition software, creating a synthesizer, 3-D animations, computerized games, search engines, a program that will suggest movies based on your own ratings of movies, ... One student created an app called "Better than Passport" to help students search for classes without having to go online to the Passport website (this won one of the People's Choice Awards!).

We have individual interviews of each project, presented by the students who created them, but in this video, there is a short synopsis of all projects:

https://youtu.be/RY54XWFdbI0

Prepare to be amazed...!

Results: Target Performance: Exceeded

What percentage of students successfully met the standards for this SLO?: 100%
We did not actually really grade them, but used the rubric to guide how we chose to award prizes. We ended up awarding 4 prizes (there was a tie in the People's Choice award):
Best Project for Calculus and above went to a student who created an algorithm that could find the shortest path between any 2 Wikipedia pages.
Best Project for Algebra/Statistics went to statistics students who examined the connection between age and how active one is.
People's Choice Awards went to the student who created the Better than Passport App and the student who created the synthesizer.

Was the assessment information sampled in any way? If so, please describe.: Yes - we let students choose to participate in this assessment. We know that a true assessment should include a random sampling of students and that volunteer bias is present in samples for which students can elect to join, but this was our first time

assessing the ILO and we did not think we could "force" instructors to create an assignment for this ILO.
We will say that our SLOs do align with the ILOs, so that kind of assessment of the ILO exists! We wanted to do something fun and to really show off the talents of our students.

Overall Recommendations

No text specified

Overall Reflection

No text specified

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