<table>
<thead>
<tr>
<th>Course SLOs</th>
<th>Assessment Methods &amp; Standard and Target for Success / Tasks</th>
<th>Results</th>
<th>Action &amp; Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors) - ECC: MATH 120 - Nature of Mathematics - SLO #3 Analyze Voting System - Analyze voting systems, methods of apportionment and representation to further the understanding of the political process. (Created by El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors))</td>
<td><strong>Assessment Method Description:</strong> Voting Methods: Plurality with Elimination Sample question is attached.</td>
<td><strong>05/12/2014</strong> - 3 of the 5 sections of Math 120 (0580, 0574, 0582) participated in this SLO. Sections 0576 and 0572 (Instructor W. Ferrell) did not participate.</td>
<td><strong>05/12/2015</strong> - Raise the success target for this assessment from 60% to 70%.</td>
</tr>
<tr>
<td><strong>Assessment Method:</strong> Exam/Test/Quiz</td>
<td><strong>Results:</strong></td>
<td><strong>Action Category:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standard and Target for Success:</strong> Based on the rubric below, it is expected that 60% of the students will score a 2 or higher on this assessment.</td>
<td></td>
<td>SLO/PLO Assessment Process</td>
<td></td>
</tr>
<tr>
<td><strong>Rubric:</strong></td>
<td><strong>Here are the results:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – No Understanding (This means the student uses the wrong method or leaves it blank).</td>
<td>* 83 students were assessed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 – Some Understanding (This means the student has a general idea of how to compute Plurality with Elimination, but there are numerous mistakes).</td>
<td>* 41 students (49.4%) scored a &quot;3&quot;, 16 students (19.3%) scored a &quot;2&quot;, 16 students (19.3%) scored a &quot;1&quot; and 10 students (12%) scored a &quot;0&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 – Most Understanding (This means they fully understand the method, but make a basic computational error or two).</td>
<td>* The overall passing rate (scoring a &quot;2&quot; or &quot;3&quot;) was 57/85 = 68.7%. This exceeds the target set (60%) for this particular SLO.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 – Complete Understanding (This means the student determines the winner by Plurality with Elimination correctly with no computational errors).</td>
<td>Here are some suggestions from the participating instructors on how to improve the success rate for this particular SLO:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Related Documents:</td>
<td>1. My analysis is that those students who showed up for class, paid attention, studied, and did the homework, understood the material, passed the exams, and scored well on the SLO question. Those that did not take the class seriously, did poorly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math 120 SLO #3 Problem</td>
<td>2. The teaching method I used was to keep the students informed as to what material was going to be covered in the upcoming class meetings, lecturing then going over the examples in the book so that the students could not only understand what to do but also why and how the material fit together, doing a final review before each exam, then creating exams which reflected the covered material.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. This was such a “last minute topic” in Math 120 and by the time I got around to teaching it, and having them do HW on it, it was the last class day before finals and they were swamped and pre-occupied. I think if this topic had been covered earlier in the semester and assessed earlier, it might have gone better.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. It might have been a mistake to not put it on the final where they might have tried harder than they did on the standalone question I gave them in class. When this SLO comes around again, I will definitely put it on the final exam…it will be interesting to see the results.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Assessed Course SLO: Solve Problems Using Sequences and Series

**Course SLO Assessment Cycle:** 2013-14 (Spring 2014)

**Assessment Method Description:**

Students were asked to solve the following problem on an exam: The fifth term of an Arithmetic Sequence is -3 and the eighteenth term is -29. (a) Determine the General Term (b) Use the result from (a) to calculate the twenty-fifth term.

**Assessment Method:** Exam/Test/Quiz

**Standard and Target for Success:**

The rubric was based on a 4 point scale with the lowest being 0, corresponding to No Understanding, 1 corresponding to Some Understanding, 2 corresponding to Most Understanding, and 3 corresponding to Complete Understanding. Students who earned a 2 or 3 were deemed Successful at mastering this SLO, while those scoring 0 or 1 were Unsuccessful. If a student left the problem blank or wrote irrelevant math, the student’s score was 0. If the student wrote a few relevant steps, the student would earn 1 point. If the student determined the General Term, the student would earn 2 points, and if the student, in addition to determining the General Term, also calculated the twenty-fifth term, the student would earn 3 points, which is the maximum. The target was set at a 75% student success rate.

**Results:**

05/27/2014 - This Spring 2014, all 15 sections of Math 130 that were offered, participated in the survey, with a total of 317 students. 41 students earned a score of 0 (13%), 53 students earned a score of 1 (17%), 61 earned a score of 2 (19%), and 162 earned a score of 3 (51%). The success rate for this SLO was approximately 70%, so, the target of 75% was not met. Though the target was not met, the student success rate was fairly close to the target. Some suggestions by instructors to help improve the student success rate were to: solve more application problems using sequences, have students solve sequence problems in pairs, use computer tutorials to solve sequence problems, solve more problems in class, assign more homework problems, and give a quiz directly from the homework.

**Standard Met? :** No

**Faculty Assessment Leader:** Milan Georgевич

**Faculty Contributing to Assessment:**

Bruce Dovner, Azzam Shihabi, Adalinda, Avila, Demetrios Dammema, Beyenne Baysa, Mark Tucker, Astatke Gizaw, Miguel Ornelas, Christina Watson, Ruth Zambrano, Jose Martinez

**Action Category:**

Teaching Strategies

01/19/2018 - Due to the high success rate on this SLO question next time this SLO is assessed we will increase the difficulty of the assessment by creating a linear programming application question where students must set up (identify the objective function and constraints) and then solve the problem.
Both sections graded the problem based on the following rubric:
Score of 0 - Student cannot graph and correctly shade any of the given constraints.
Score of 1 - Student can correctly graph and shade one of the constraints.
Score of 2 - Student can correctly graph all of the constraints, shade the correct feasible region, but they do not identify all corner points correctly.
Score of 3 - Students can graph constraints, shade the feasible region, identify all corner points and determine which corner point maximizes the objective function.

Assessment Method:
Exam/Test/Quiz

Standard and Target for Success:
70% of the students taking Math 140 will score a 2 or 3 on this assessment.

Related Documents:
Math 140 SLO for Spring 2014.docx

El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors) - ECC: MATH 150 - Elementary Statistics with Probability - SLO #3 Central Limit Theorem - Use the Central Limit Theorem to compute probabilities concerning the distribution of the sample means and comparing these to the probabilities of the related random variable. (Created By El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors))

Course SLO Assessment Cycle:
2013-14 (Spring 2014)

Input Date:
05/01/2014

Course SLO Status:
Active

Assessment Method Description:
Instructors were asked to use a similar problem or the suggested problem below.
Suggested Problem:
The Boeing 757-200 ER airliner carries 200 passengers and has doors with a height of 72 in. Heights of men are normally distributed with a mean of 69.0 in and a standard deviation of 2.8 in.

a. If a male passenger is randomly selected, find the probability that he can fit through the doorway without bending.
b. If half of the 200 passengers are men, find the probability that the mean height of the 100 men is less than 72 in.
c. When considering the comfort and safety of passengers, which result is more relevant: the result from part (a) or the probability from part (b)? Why?
d. When considering the comfort and safety of passengers, why are women ignored in this case?

Scoring Rubric:
0 – no understanding (Left problem blank or wrote irrelevant math)
1 – some understanding (Wrote down a few relevant steps)
2 – most understanding (Made only a

05/29/2014 - All 25 sections of math 150 participated in this SLO assessment. A total of 728 students participated and among them, 214 got 3 (29%), 236 got 2 (32%), 180 got 1 (25%) and 98 got 0 (13%).

Continue to use effective methods such as:
1. Encourage the students to come to the office hours.
2. Give examples related to students’ life to inspire interest.
3. Continue to use effective teaching methods, technology and group activities.
4. Make sure that any SI coaches in the class have a thorough grounding in continuous probability distributions in general.

Standard Met?:
Yes

Semester and Year Assessment Conducted:
2013-14 (Spring 2014)

Faculty Assessment Leader:
Wang, Lijun

Faculty Contributing to Assessment:

Reviewer’s Comments:
05/30/2018 - It is our goal to increase the success of this SLO from 60% to 65%.

Action Category:
SLO/PLO Assessment Process

05/30/2018 - It is our goal to increase the success of this SLO from 60% to 65%.

Action Category:
SLO/PLO Assessment Process
<table>
<thead>
<tr>
<th>Course SLOs</th>
<th>Assessment Methods &amp; Standard and Target for Success / Tasks</th>
<th>Results</th>
<th>Action &amp; Follow-Up</th>
</tr>
</thead>
</table>
| minor mistake)  
3 – complete understanding  (Complete the entire problem correctly) | All 25 sections of math 150 participated in this assessment. About 60% of the section instructors are satisfied with their results. | | |

**Assessment Method:**
Exam/Test/Quiz

**Standard and Target for Success:**
It is expected that at least 60% of students will score 2 or above on this SLO objective. Most of the participating instructors choose the suggested questions to conduct this SLO assessment. Others have chosen to use a similar problem of their own.

**Related Documents:**
- Question_n_Rubrics

---

**El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors) - ECC: MATH 160 - Calculus I for Biological, Management and Social Sciences - SLO #3 Area Problems - Solve area problems using integral calculus. (Created By El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors))**

**Course SLO Assessment Cycle:**
2013-14 (Spring 2014)

**Input Date:**
11/21/2013

**Course SLO Status:**
Active

**Assessment Method Description:**
Find the area of the region under the graph of f(x)=2/x from x = 1 to x = 3. Graph this area.

Alternate problem was given. See attachment.

**Assessment Method:**
Exam/Test/Quiz

**Standard and Target for Success:**
It is expected that 65% will score 2 or 3 on the rubric below which shows mastery of solving an area problem using integral calculus.

**Rubric:**
- 0 - No understanding (This means that the student left the paper blank or provided work that was incorrect)
- 1 - Some understanding (This means that the student was able to sketch the area but the integral is not set up correctly.)
- 2 - Most understanding (This means that the student was able to graph the area correctly, set up the correct integral but had difficulty evaluating the integral.)
- 3 - Complete understanding (Student was able to graph the area correctly, set up the correct integral and correctly evaluate the integral.)

**Results:**
- 05/16/2014 - A total of 75 students were assessed (3 out of 5 sections). The results are as follows:
  - 28 students received a 3 (37.33%)
  - 22 students received a 2 (29.33%)
  - 18 students received a 1 (24.00%)
  - 7 students received a 0 (9.33%)

- Results met and exceeded expectations. 66.67% of the 75 students scored a 2 or 3. Individual sections who used the proposed SLO question with a score of 2 or 3 ranged from 72.50% to 85.71%. The one section who used a different question had 42.86% of the students with a score of 2 or 3.

**Suggestions from instructors teaching the course included:**
1. Use the sample SLO question next time
2. More review on rational exponents (which is a topic that is covered in algebra)
3. Review graphing basic functions

**Standard Met? :**
Yes

**Semester and Year Assessment Conducted:**
2013-14 (Spring 2014)

**Faculty Assessment Leader:**
Eduardo Morales

**Faculty Contributing to Assessment:**
E. Morales, D. Yee, and P. McDonnell contributed to the SLO results. The following faculty did not comply to SLO assessment:
- Martha Sandoval-Martinez (resigned)
- Chau Tran (part-time instructor)

05/30/2018 - It is our goal to raise the target success rate for this SLO assessment from 65% to 70%.

**Action Category:**
SLO/PLO Assessment Process
El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors) - ECC: MATH 161 - Calculus II for Biological, Management and Social Sciences - SLO #3 Convergence and Divergence of Series - Determine convergence and divergence of infinite series. (Created By El Camino: Course SLOs (MATH) - Math (GE and Non-Science Majors))

Course SLO Assessment Cycle: 2013-14 (Spring 2014)

Input Date: 11/21/2013

Course SLO Status: Active

Assessment Method Description:
Student Test Question: Test the series for convergence or divergence using any appropriate test. Identify the test used, explain your reasoning, followed by a clear conclusion.

Summation from n = 1 to infinity of (n^3/n)! - OR- Summation from n = 1 to infinity of 3^(n-1)/n!.

*Please see attached <PDF> for full test questions and directions to instructors under Related Document since TracDAT won't allow special series notations from Microsoft Word.

Assessment Method:
Exam/Test/Quiz

Standard and Target for Success:
Our previous success rate on SLO #3 was 54%. Since this SLO is typically tough for our students, we worked really hard to improve the previous result. Our target goal this semester is that 60% of these students will score a "2" or a "3" on this SLO using the following rubric:

0 – No understanding
Unable to assess that the problem requires the Ratio Test.

1 – Some understanding
Student applies the Ratio Test but makes major error(s).

2 – Most understanding
Student applies the Ratio Test but makes only minor error(s).

3 – Complete understanding
Student applies the Ratio Test correctly and reaches the correct conclusion.

Related Documents:
Math 161 SLO Question and Rubric - Spring 2013.pdf

Results

04/30/2014 - Here are the results from assessing a total of 43 students from two sections (section 0720 and section 0722)
16 students scored a "3";
17 students scored a "2";
8 students scored a "1";
2 students scored a "0"

This means a total number of 33 students out of 43 students passed SLO #3.
The success rate for SLO #3 in SP 2014 is 77%.

One useful teaching strategy, which contributed to the success on this SLO, is that Math 161 instructors reviewed factorials and powers separately before applying the Ratio Test on series involving both factorials and powers.
It might also be a good idea to have students work together on harder problems involving the Ratio test to help each other in class.

Standard Met?: Yes

Semester and Year Assessment Conducted: 2013-14 (Spring 2014)

Faculty Assessment Leader: Linda Ho

Faculty Contributing to Assessment: Linda Ho and Allie O'Leary

Related Documents:
Math 161- SLO-3 Sp2014.docx

Action Category:
SLO/PLO Assessment Process

04/01/2018 - Our current goal is to increase the target of success from 60% to 65% in the future.