**Course-Level Student Learning Outcomes (SLO) Assessment Plan**

SLOAT member’s name(s): Eman Aboelnaga and Brooke Orosz

Division/Department: Math & Physics Division

Course to be assessed for SLOs in Fall 2011: MTH 092

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

1. What student learning outcomes (SLOs) will you assess in Fall 2011? Please identify at least 2 (total) chosen from the following: course goals (CG), general education goals (GEG) for which the course has been ‘affirmed’ by GECC, and/or applicable program goals (PG) from your ECC Course Outline SLO Assessment Summary Sheet.

* SLO #1 CG 1: Demonstrate knowledge of the fundamental concepts and theories from algebra and geometry.
* SLO #2 CG 2: Utilize various problem-solving and critical-thinking techniques to set up and solve real-world applications.

1. For each SLO given above, what assessment method**s** (rubrics, assignments, tests, classroom assessment techniques, portfolios, surveys, etc.) will you implement in Fall 2011 to gather evidence of student learning related to the outcome? Please make sure to vary the types of assessment methods you choose to include the following: direct (D) & indirect (I); process (P), input (In) & context (C); summative (S) & formative (F); qualitative (QL) & quantitative (QN); Objective (Obj) & subjective (Subj)

Assessment method**s** to be used to assess SLO #1 and SLO #2:

1. We plan to continue to blue-print the MTH 092 cumulative final exam as well as the midterm exam. The results from academic year 2010 – 2011 will be used to improve the blue-printing process for this academic year. The number of multiple choice questions will include critical thinking questions that are reflective of the revised homework questions. These multiple choice questions will determine the extent of student acquisition of MPOs from MTH 092. This assessment method is D, SLO, S and F, QN, and Obj.
2. At the end of the semester, each faculty member teaching at least one of the selected sections will be asked to submit the following information for each student in their section: student name, student ID, grade earned, number of absences, and whether the student used the Online Homework package. Using this information, we plan to determine the following:
3. whether there is a correlation between number of absences and final grade. This assessment method is I, P, S, QN, and Obj.
4. whether there is a correlation between using the Online Homework package and final grade. If the assessed courses do not all use an online Homework package, then we will assess them separately. This assessment method is I, P, S, QN, and Obj.
5. A student survey will be administered in all selected sections. This survey will investigate students’ attitudes regarding the use of online Homework Management systems and the various factors that prevent them from completing it. The results will be analyzed and used to incorporate changes in the implementation of homework in Spring 2012. At present, we plan to use WebAssign to create and administer the survey. We may opt to use scantron forms. The final decision will depend on the availability of the equipment. This assessment method is I, In, S, QN, and Subj.
6. For each SLO given above, identify *when* each assessment method will be used in the course in Fall 2011; e.g., draw up a timeline for the course which indicates when every SLO assessment method named above will be used throughout the semester (Week 1 – Week 15).

Timeline for all assessment methods:

1. ***Week of September 19:***  A letter will be distributed inviting the faculty of the selected sessions to participate in this study. The purpose of the study will be established and the expectations of the instructors will be outlined.
2. ***Week of October 11:*** Prepare and administer online/paper survey through WebAssign, comparable online Homework Management System, or through the use of scantron sheets.
3. ***Week of October 17:*** Scantron forms will be distributed to selected sections prior to the MTH 092 Midterm Exam. The results of the multiple choice questions will be assessed using a scantron machine. A statistical analysis will later be completed by the two co-course coordinators of MTH 092: Eman Aboelnaga and Brooke Orosz.
4. ***Week of December 12:*** Scantron forms will be distributed to selected sections prior to the MTH 092 Final Exam. The results of the multiple choice questions will be assessed using a scantron machine. A statistical analysis will later be completed by the two co-course coordinators of MTH 092: Eman Aboelnaga and Brooke Orosz.
5. ***Week of December 12:*** The instructors of the sample sections will be provided with a template and instructed to submit to the two course coordinators a complete list of all their students, their student IDs, their final grade for the course, # of absences in the class, as well as the extent of student participation in online homework.
6. ***Week of December 19:*** The coordinators will collect this data from participating faculty and then organize this data into an Excel spreadsheet in order to have a statistical analysis done.
7. How many sections of the course or how many students will be involved in using these assessment instruments and collecting SLO assessment data in Fall 2011? Please identify your sample size by number of classes (sections of the course) or number of students. (Remember: A 5% error margin in your analysis is ensured if you sample 278 out of 1000 students, 217 out of 500 students, 184 out of 350 students, 132 out of 200 students, 80 out of 100 students, or 44 out of 50 students. – taken from p. 48 of *Assessing Student Learning: a common sense guide*, 2nd edition by Linda Suskie)

8 sections of MTH 092 in Fall 2011 with approximately 24 – 30 students in each section (i.e., a total of approximately 192 - 240 students) will be involved in data collection.

1. Which sections or which students will be involved in using these assessment instruments and collecting SLO assessment data in Fall 2011?

Eman Aboelnaga Section 010

Brooke Orosz Section DE1

Cesar Jaramillo Section 017 and 020

Martin Weissman Section 022

Shohreh Andresky Section CW4

Violeta De Pierola Section AF1 and AF2