College of Science (CSCI)
North Science 135
25800 Carlos Bee Boulevard, Hayward CA 94542

2014-2015 CSCI EETF Assessment Year End Report, June, 2015

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CSU East Bay Mathematics
AY 2014-15

SLO 1: Apply the definitions, techniques and theorems of abstract mathematics

SLO 1 RVF Rubric – Readability, Validity, Fluency

	Missing (0)	Emerging (1)	Developing (2)	Mastering (3)
Readability	Informal or non-mathematical language is used. There is misuse of notation/symbols.	Some improper mathematical language or notation is used.	Mostly proper mathematical language and notation is used.	Proper mathematical language and notation is used.

SLO 3: Apply mathematical algorithms to solve problems, both individually and in teams

SLO 3 RVF Rubric – Readability, Validity, Fluency

	Missing (0)	Emerging (1)	Developing (2)	Mastering (3)
Readability	Informal or non-mathematical language is used. There is misuse of notation/symbols.	Some improper mathematical language or notation is used.	Mostly proper mathematical language and notation is used.	Proper mathematical language and notation is used.
Validity	Significantly inaccurate or irrelevant steps in algorithms are present. Important information is missing.	Mostly accurate steps in algorithms are present. May include some irrelevant or unjustified statements.	Steps in algorithms are accurate and relevant.	Steps in algorithms are accurate and relevant and connected/deduced correctly.
Fluency	No coherent flow of ideas Listing facts without a sense of how to link them to get a correct solution.	Partially coherent and organized, but inconsistent. Appeals to intuition. Some unjustified or improperly justified steps in algorithms are present.	A correct and essentially complete solution given. Logic, steps in algorithms, and flow overall /TT1 .4 l hun ome	

D. Summary of Assessment Results

Courses Assessed

Lower Division: 1304, 2101, 2304, 3331

Upper Division: 3121, 3301, 3600, 3750, 3841

SLO's Assessed

Math 2101 Elementary Linear Algebra, % Correct on Assessment

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Most of these courses had an enrollment of 30-40 students. The number of students participating in the assessment varied greatly from section to section. Also, the method of giving the assessment varied greatly. We have concluded that next year we will require the questions to be imbedded in the final exam so all student who take the final will participate in the assessment process.

+997

Closing the Loop:

Lower Division:
In using common multiple choice questions (in lower division) we learned that there was significant variation in students ability to answer the questions based on content coverage. We will reexamine the questions to ensure they are central and either modify the questions or ensure deeper coverage and/or emphasis within the course.

Upper Division:

This was our first attempt at using rubrics to score authentic student work for attainment levels of PLOs. We learned that

a) developing a rubric to be used for a variety of courses forced/allowed us to examine common features of successful student work that was not exclusively looking for the "right answer = validity."

b) identifying appropriate problems for scoring takes some care as the dimensions of the rubric (readability, validity, flow) were not really required and/or were too interdependent on some types of problems.

c) we will continue to refine the rubrics for greater ease of use and applicability.

d) we will consider sharing the rubrics with math majors to further emphasize the importance of each dimension of successful student work.

e) we will consider how the different levels/scores via the rubrics may (or may not) align with I/D/M levels of attainment of PLOs.

f) learned that it was not always easy for instructors unfamiliar with course content to score student work....even with the RVF rubric.program improvements (e.g., changes in course content, course sequence, student advient process (e.g. add direct assessment, expand sample of student participants in indirect assessment)?

E. Suggestions and Recommendations for the CSCI EETF in the Future

None at this time.