

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

A. Program Student Learning Outcomes

Masters of Science in Mathematics

Students graduating with a Masters of Science in Mathematics will be able to:

1. Students will be able to apply the fundamental definitions and theorems of pure mathematics
2. Students will be able to apply the fundamental definitions and theorems of applied mathematics
3. Students will be able to apply advanced techniques of mathematical analysis
4. Students will be able to apply techniques of advanced algebra
5. Students will be able to apply advanced techniques of geometry and topology
6. Students will be able to use mathematical algorithms

Students taking Option B or C for the Masters in Mathematics receive focused emphasis on particular PLOs as follows:

- The Applied Mathematics Option emphasizes PLOs #2, 3 & 6 above.
- The Mathematics Teaching Option emphasizes #1, 2, 4 & 5 above.

B. Program Student Learning Outcome(s) Assessed

SLO 1: Apply the fundamental definitions and theorems of pure mathematics

SLO 2: Apply the fundamental definitions and theorems of applied mathematics

C. Summary of Assessment Process

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For each graduate course used in our assessment, a final exam question was identified as a typical problem for the course that assessed the given SLO. Each problem was scored by the graduate committee for readability, validity and fluency using the rubric below. The results were organized and discussed by the graduate committee.

SLO 1 RVF Rubric – Readability, Validity, Fluency

	Missing (0)	Emerging (1)	Developing (2)	Mastering (3)
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D. Summary of Assessment Results

Courses Assessed

Math 6151, 6200, 6349 and 6842

SLO's Assessed

SLO 1: Apply the fundamental definitions and theorems of pure mathematics

SLO 2: Apply the fundamental definitions and theorems of applied mathematics

D = developed in this course

M = mastered in this course

Math 6151 Graph Theory, SLO 2/D (6 students)

!! " #\$\$#%&! ' () * & # % &! + ,) . / # % &! " 0\$1) * # % &!

write a fluent proof.

Math 6349 Theory of Functions of a Real Variable, SLO 1/M (13 Students)

!!	" #\$\$#%&!	' () * &#%&!	+ ,) - . / #%&!	" 0\$1) * #%&!
2)0304##15!	67!	=7!	AC7!	: 87!
<0-#3#15!	67!	: 87!	AC7!	=7!
>-?)%@5!	67!	8; 7!	; B7!	: 87!

These scores indicate 93% of the students have developed or mastered writing a readable proof using the fundamental definitions and theorems of pure mathematics, 80% have developed or mastered writing a valid

- c) we will continue to refine the rubrics for greater ease of use and applicability.
- d) we will consider sharing the rubrics with math graduate students to further emphasize the importance of each dimension of successful student work.