

Institutional Effectiveness Report

2019-20

Programs: Mathematics MS

College and Department: College of Arts & Sciences Mathematics

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Mission: All undergraduate degree programs at Tennessee Tech require at least one course in mathematics and many require several courses. The Department of Mathematics provides a variety of general education courses, introductory and advanced undergraduate courses in support of STEM majors, and graduate level courses for the MS in mathematics and other graduate programs.

As a central part of a STEM-focused comprehensive institution, the Department of Mathematics strives to create successful learners of the subject of mathematics in the university community and in the community where we live. Learning opportunities are provided to students of all disciplines to advance their understanding of mathematical concepts and their effective use of analytic practices and critical thinking as useful in their studies and everyday life. The departmental faculty conduct research in mathematics and as part of interdisciplinary teams and provide service to the department, college, University, and mathematical community.

The mission of the TTU Department of Mathematics is to promote the learning of mathematics through effective teaching, research, and public service. Such learning opportunities are provided to students of all disciplines in support of the mission of the University.

Program Goals:

PG 1: The MS in Mathematics degree program will average at least 5 graduates per year.

PG 2: Mathematics graduate students will participate in extracurricular activities related to mathematics.

Student Learning Outcomes:

SLO 1: All MS in Mathematics graduates will demonstrate knowledge of graduate Algebra and Analysis.

Mathematics MS graduates will 41 ((g) 2.6 (r) 3 (w) -3.4.8 (ins) -1.3 r) 11 (at) -3 (e) -3 () 10.6 (k) -2.5.2 (e) 7.3

A departmentally developed curriculum map can be found in Appendix 1 that shows the connections between courses and student learning outcomes.

Assessment Methods:

PG 1: Average 5 graduates per year

1. Count of the number of MS in Mathematics graduates in the previous ~~July~~ 30 time period: The number of students earning the MS in Mathematics in the previous year is determined and trends are tracked using a 5 year average of the number of graduates.

Threshold of Acceptability: Five year running average of 5 graduates per year.

PG 2: Participation in extracurricular activities

1. Count of the number of presentations by graduate students and guest speakers:

SLO 1: Demonstrate knowledge of graduate-level Algebra and Analysis

2019-20 graduate demonstrated a breadth of knowledge of mathematics by completing Math 6110 Abstract Algebra and a 6000

Appendix 2: Rubric for Master's Defenses/ Oral Exam

Student demonstrated knowledge of his or her mathematical area of emphasis

- student explained the ideas contained in his or her thesis

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