Institutional Effectiveness Report

2019-20

Programs: Mathematics BS

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-infused 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

SLO 2: All students graduating from the University will be "mathematically literate" and able to apply their knowledge from the mathematics courses in their curricula.

A departmentally developed

Results:

PG 1: Recruit and retain a strong number of students

The BS in Mathematics program achieved this goal by graduating 14 students in the 2019-2020 academic year. The table below shows the number of graduates per year. The average number of graduates for the last five years was 13.6. Hence, the department has met its goal of 10 graduates per year.

Number of TTU BS in Mathematics Graduates
July 1-June 30 reporting periods

Year	Men	Women	Total Number of Graduates

TTU Student Response Averages on NSSE Questions Related to Ability to handle Quantitative Data

	2014 TTU	2014 THEC	2014 Carnegie	2017 TTU	2017 THEC	2017 Carnegie	2019 TTU	2019 Quality Assurance	2019 Carnegie

Appendices

1. Math BS Curriculum Map

Appendix 1: Math BA Curriculum Map

The table below is a curriculum map showing how the required mathematics courses relate to learning goals for mathematics majors. The mathematics majors take at least 3 additional courses that reinforce these goals.

Provide Students with Conceptual Understanding and Computational, Reasoning and Communication Skills	To Begin a Career or Pursue

II. Computational Skill												
a) Students will demonstrate algebraic, computational, & algorithmic skills to determine solutions to mathematical problems and interpret the results	X	X	X	X	X			X			X	X
b) Students will utilize technology to solve problems and interpret results												
III. Reasoning & Communication Skills												
a) Students will write sound mathematical proofs						X	X		X	X		X
b) Students will explain orally or in writing the methodology used to solve math or statistical problems						X	X		X	X	X	X