

Mathematics MS: 2019-2020

Definition of Unit

Providing Department:

Mathematics MS

Department/Unit Contact:

Michael Allen

Mission/Vision Statement:

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.

Goal 1. Average at least 5 graduates per year

Define Goal:

The MS in Mathematics degree program will average at least 5 graduates per year

Intended Outcomes / Objectives:

DRILL DOWN-----

RELATED ITEM LEVEL 1

Assessment- Goal 1: Count of the number of MS in Mathematics graduates in the previous July 1-June 30 time period

Frequency of Assessment:

annually

Rationale:

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.

RELATED ITEM LEVEL 2

Results- Goal 1: Number of Graduates per Year

Results:

The MS in MATH program graduated 5 students during the 2019-20 academic year which is on target of for our goal of graduating 5 students each academic year. For the most recent five academic years the program has an average of 5.4 graduates per year. The department has plans to meet and discuss ways to increase the number of graduates for the next five academic years.

Number of Degrees Awarded July 1-June 30

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Male | 2 | 2 | 5 | 1 | 4 | 7 | 2 | 1 | 2 | 3 |
| Female | 1 | 0 | 0 | 0 | 2 | 2 | 4 | 3 | 1 | 2 |
| Total MS in MATH | 3 | 2 | 5 | 1 | 6 | 9 | 6 | 4 | 3 | 5 |

Attachments:

Goal 2. Students will participate in extracurricular activities

Define Goal:

Mathematics graduate students will participate in extracurricular activities related to mathematics. These activities will include participation in the departmental Graduate Seminar and Teaching Seminar, presenting research, and the opportunity to attend lectures by guest speakers.

Intended Outcomes / Objectives:

DRILL DOWN-----

RELATED ITEM LEVEL 1

Assessment-Goal 2: Count of the number of presentations by graduate students and guest speakers

Frequency of Assessment:

annually

Rationale:

The number of presentations during the previous year by graduate students (in the Graduate Seminar and Teaching Seminar, at Student Research Day, or at a conference) is counted. A count of the number of presentations by guest speakers is also made.

Learning Outcome 1. Students will demonstrate breadth of mathematical knowledge

Define Goal:

All MS in Mathematics graduates will demonstrate knowledge of graduate-level Algebra and Analysis.

Intended Outcomes / Objectives:

MS in Mathematics graduates will demonstrate knowledge of graduate-level Algebra and Analysis by earning grades of B or better in Math 6110-Abstract Algebra and a 6000-level course in Analysis (Math 6010-Functional Analysis, Math 6310-Complex Analysis, or Math 6410-Real Analysis).

DRILL DOWN-----

RELATED ITEM LEVEL 1

Assessment of MS student breadth of knowledge

Frequency of Assessment:

each semester as needed as students complete the degree program

Rationale:

A student's knowledge of Algebra and Analysis is assessed by course grades in Math 6110-Abstract Algebra and the required 6000-level course in Analysis (one of Math 6010-Functional Analysis, Math 6310-Complex Analysis, or Math 6410-Real Analysis) and the course grades in the year-long course sequences on the student's program of study.

Threshold of Acceptability: Students should earn a grade of B or better in all classes

RELATED ITEM LEVEL 2

Results: Learning Outcome 1-Breadth of Knowledge of Mathematics

Results:

(number of graduate students) 2019-20 graduate demonstrated a breadth of knowledge of mathematics by completing Math 6110-Abstract Algebra and a 6000-level course in Analysis with a grade of B or better.

Attachments:

Learning Outcome 2. Students will demonstrate depth of mathematical knowledge

Define Goal:

All MS in Mathematics candidates will demonstrate a command of principles of general mathematics and their particular area of interest.

Intended Outcomes / Objectives:

DRILL DOWN-----
RELATED ITEM LEVEL 1

Assessment of MS student depth of knowledge

Frequency of Assessment:

each semester as needed as students complete the degree program

Rationale:

Each non-thesis student's mathematics knowledge is assessed by two written comprehensive exams.

Each thesis student's general mathematics knowledge is assessed by his/her performance on an oral exam and his/her understanding of a particular area of interest is assessed by the thesis and the thesis defense.