

Annual Academic Assessment Report
Department of Mathematical Sciences
MATHMS
2024-2025

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Across the many programs within the Department of Mathematical Sciences (BA/BS, MS, PhD) there are common learning objectives recognized by the faculty. While the program requirements show differences in the skills and tools employed within the various options, the learning objectives are stated broadly to apply to each.

- Critical and analytical thinking
- Effective communication of abstract and technical information
- Logical reasoning
- Mastery of computational tools for analyzing data and/or mathematical structure
- Problem solving
- Understanding of algorithms and processes

The data below is from the Office of Strategic Analytics & Insights and records the number of Master of Science degrees in Mathematics awarded in the last seven years (average: 6).

2018	2019	2020	2021	2022	2023	2024
7	13	6	5	2	6	4

Note: data from 2025 is not available yet.

Several of these students go on to enter a doctoral program in mathematics, either at the University of Arkansas or elsewhere.

Analysis of Assessment of Student Learning Outcomes

The Department of Mathematical Sciences employs three main tools for assessing the student learning outcomes of the Master's-level graduate students in our department.

- A. [Course work](#)
- B. [Comprehensive Examination](#)
- C. [Exit Interview Survey](#)

A. Course Work: Students complete a rigorous program of courses that is routinely monitored and updated by the department's Graduate Committee. Courses include assignments that assess the previously mentioned learning outcomes by means of written work (both

computational and theoretical) and presentations (both formative and summative). The assignments involve a mixture of individual work and work in groups.

B. Comprehensive Examination: Students must pass four 2-hour long examinations in accordance with the department's Comprehensive Examination policy. These exams are taken at the end of the student's second year in the program and cover a wide range of topics in advanced mathematics. Students can replace two of the examinations by receiving a score of "Master's" or "PhD" on the corresponding Qualify Examination.

In 2025 to date, the Comprehensive Examination was taken by one student. This student previously passed one of the exams that constitute the Comprehensive Examination and failed three. The student is re-taking the remaining three parts of the Comprehensive Examination at the time this report was written. In 2024, the Comprehensive Examination was taken by four students. Two passed four of the exams (resulting in complete passes), one passed one exam and failed three, and one student failed all four exams. In 2023, the Comprehensive Examination was taken by one student that passed four of the examinations and failed one, ultimately resulting in a complete pass.

C. Exit Interview Survey: The exit interview was initiated in Spring 2024 and has only been taken by two MATHMS students so far, one in 2024 and one in 2025. Overall, both students were satisfied with the program and gave high scores (4 or 5 out of 5) to all survey items.

- Quality of instruction from faculty in the department
- Concern of department faculty toward graduate students
- Sense of community among graduate students and math/stat faculty
- Quality of support from department for teaching
- Quality of support from department for research
- Overall assessment of the Department of Mathematical Sciences
- The courses required for the degree program were challenging
- The program prepared me well for my career plans
- I would recommend pursuing a graduate degree in mathematics/statistics at the University of Arkansas to others

One respondent included critical and productive feedback on revising the Comprehensive Examination process.

Changes To Degree Planned or Made Based on Assessment

We have no immediate plans to change the degree based on this assessment. The feedback on the Comprehensive Examination is something that the graduate committee will consider.

Changes To the Assessment Process Planned or Made

We have no plans to change the assessment process currently.