

# MASTER OF SCIENCE IN MATHEMATICS

In the MS in Mathematics program students take courses in the fundamental areas of advanced pure and applied mathematics. Small class sizes and close mentoring by faculty create a positive environment designed to help students succeed in their academic and life goals. Graduates of this program have a more comprehensive and deeper view of mathematics, leading to diverse career opportunities in teaching, industry, or doctoral studies in mathematics. Past graduates are employed at community colleges and universities, in actuarial science, computer science, accounting/finance, and the oil and gas industry. A thesis option is available for students interested in doing mathematical research in the areas of combinatorics, commutative algebra, noncommutative algebra, algebraic statistics, graph theory, group theory, functional analysis, topology, knot theory, applied mathematics, numerical analysis, mathematical biology, and differential equations.

**Additional information:** Reference the Program Landing Page (<https://www.shsu.edu/programs/graduate/mathematics/ms.html>) for additional information, such as cost, delivery format, contact information, or to schedule a visit.

Applicants seeking admission to the graduate program in Mathematics must submit the following directly to the Office of Graduate Admissions (<https://www.shsu.edu/dept/graduate-admissions/prospective-students.html>):

1. Graduate Application (<http://www.shsu.edu/admissions/apply-texas.html>)
2. Application fee (<http://www.shsu.edu/dept/graduate-studies/application-fee.html>)
3. Official transcript(s) of all previous college work
4. Three letters of recommendation from the Mathematics or Statistics faculty at the student's undergraduate degree-granting institution

An overall undergraduate GPA of 3.0 or higher is preferred for admission into the Mathematics program. Based on a review of an applicant's undergraduate transcript, the Department of Mathematics and Statistics (<https://www.shsu.edu/academics/mathematics-and-statistics/>) may require completion of undergraduate stem courses as a condition for admission.

The degree requires a minimum of thirty-six hours of graduate credit. A comprehensive examination in each of algebra and analysis is administered by the Mathematics Graduate Committee at the beginning of the second year of the program. Requirements specified in the degree plans are subject to minor modification by the department. To ensure a balanced program, all electives must be approved by the graduate advisor.

## Master of Science (M.S.) in Mathematics (Thesis)

Code	Title	Hours
<b>Master of Science in Mathematics (Thesis)</b>		
<b>Required Courses</b>		
MATH 6333	Foundations Of Analysis I	3
MATH 6334	Foundations Of Analysis II	3
MATH 6335	Algebra I	3
MATH 6336	Algebra II	3
MATH 5397	Discrete Mathematics	3
MATH 6332	Introduction To Topology	3
MATH 6368	Numerical Linear Algebra	3
MATH 6379	Functions Of Complex Variable	3
<b>Prescribed Electives</b>		
Select two graduate courses in MATH in consultation with the Graduate Advisor		6
<b>Additional Coursework</b>		
MATH 6099	Research and Thesis	3
MATH 6398	Research And Thesis	3
<b>Total Hours</b>		<b>36</b>

## Master of Science (M.S.) in Mathematics (Non-Thesis)

Code	Title	Hours
<b>Master of Science in Mathematics (Non-Thesis)</b>		
<b>Required Courses</b>		
MATH 6333	Foundations Of Analysis I	3
MATH 6334	Foundations Of Analysis II	3
MATH 6335	Algebra I	3
MATH 6336	Algebra II	3
MATH 5397	Discrete Mathematics	3

MATH 6332	Introduction To Topology	3
MATH 6368	Numerical Linear Algebra	3
MATH 6379	Functions Of Complex Variable	3
MATH 6380	Research Methods in Mathematics	3
or MATH 5300	Mathematics Internship	
<b>Prescribed Electives</b>		
Select three graduate courses in MATH selected in consultation with the Graduate Advisor		9
<b>Total Hours</b>		<b>36</b>

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The MS in Mathematics is designed to provide graduates with the following marketable skills:

- Expertise in mathematical analysis and problem solving that is applicable in a wide variety of industry-related positions.
- Expertise in mathematical writing.
- Experience in multiple phases of course preparation and teaching of mathematics at the freshman level.
- Preparation for further study at the doctoral level in mathematics and other closely related areas.