Mathematical Sciences M.S. (Concentration in Computational Science)

Degree Requirements: 36 Credit Hours

Admission Requirement

Regular
For regular admission to the College of Graduate Studies to pursue work leading to this degree, the applicant must have:

1. Completed requirements for the Bachelor’s degree in a science, engineering, or mathematical discipline at a regionally accredited college or university.
2. Submitted scores from the Graduate Record Examinations (GRE) and Test of English as Foreign Language (TOEFL) (international students only) to the College of Graduate Studies. Conditional admission without the GRE is acceptable, provided it is completed within one calendar year of admission to the program.
3. Successfully completed courses in calculus, probability, and linear algebra.

Provisional
Applicants who do not meet admission requirements may be admitted provisionally but must take appropriate undergraduate courses before receiving regular admission. Admission of an applicant who is deemed marginal may require that an interview be conducted by a committee of graduate faculty members from the department.

Non-Degree
Non-degree students are accepted on an individual basis as space is available. Upon the advisor’s recommendation, up to a maximum of nine (9) credits earned as a non-degree student may be included in the program of study if a non-degree student is granted regular admission.

Program of Study
The graduate student and the graduate advisor shall develop a Program of Study that consists of 30 credits of graduate course work, including nine (9) credits of core courses, and 21 credits of elective courses. In addition, the Program of Study will include three (3) credits of Research and three (3) credits of Thesis in the area of concentration. Of the 36 required credits, at least 18 credits must be at the 7000 level. At most, 11 credits of any combination of Directed Study in Mathematics (MATH 7890), Research (MATH 7895) and Thesis (MATH 7999) will count towards the 36 credits required for the degree.

Requirements

<table>
<thead>
<tr>
<th>Core requirements</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MATH 7132 Methods of Optimization</td>
<td>3</td>
</tr>
<tr>
<td>MATH 7231 Advanced Numerical Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 7234 Advanced Linear Algebra</td>
<td>3</td>
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Selected Courses in Computational science. Other approved courses outside the department that support the concentration areas may also be considered. See the department website for information on acceptable courses for this concentration. A maximum of two elective courses may be taken from outside the student’s concentration area. These must be approved by the graduate advisor.

Each candidate for the Master of Science in Mathematics must complete a thesis on a subject in Computational Science approved by the student’s advisor. The thesis must be defended before a student advisory committee. The presentation part of the defense is open to the public.