APPLIED MATHEMATICS - M.S.

Description
The Master of Science degree in Applied Mathematics is primarily a terminal, pre-professional degree comprising coursework beyond the bachelor’s degree emphasizing areas relevant to applications in the sciences and including the engineering, biological, financial and physical sciences. Students are required to write and defend a thesis in an area agreed upon with a faculty advisor.

FULLY OFFERED AT:
• Kent Campus

Admission Requirements
• Official transcript(s)
• Bachelor’s degree
• Goal statement
• Three letters of recommendation
• Résumé or vita

English Language Proficiency Requirements for International Students: All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 74 MELAB score, minimum 6.0 IELTS score or minimum 50 PTE Academic score. For more information on international admission, visit the Office of Global Education’s admission website. Effective spring 2018.

For more information about graduate admissions, please visit the Graduate Studies website.

1 Applicants are not required to have an undergraduate degree in applied mathematics; however, they are expected to have proficiency in numerical analysis and statistics at the level of MATH 40012 and MATH 42202. They are also expected to have taken computer science coursework equivalent to CS 13001. Those who do not meet these specific requirements may be granted conditional admission by the Graduate Studies Committee.

Program Learning Outcomes
Graduates of this program will be able to:

1. Engage effectively in problem solving, including exploring examples, devising and testing conjectures and assessing the correctness of solutions.

2. Reason in mathematical arguments at a level appropriate to the discipline, including posing problems precisely, articulating assumption and reasoning logically to conclusions.

3. Approach mathematical problems creatively, including trying multiple approaches and modifying problems when necessary to make them more tractable.

4. Communicate mathematics clearly both orally and in writing.

5. Teach mathematics at the college-level.

6. Obtain depth in some subdiscipline of applied mathematics.

Program Requirements
Major Requirements
[AS-MS-AMTH]

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 60061 MATHEMATICAL STATISTICS I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 60062 MATHEMATICAL STATISTICS II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 62251 NUMERICAL ANALYSIS I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 62252 NUMERICAL ANALYSIS II</td>
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<tr>
<td>MATH 67199 THESIS I</td>
<td>6</td>
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<tr>
<td>Computer Science or Mathematics Graduate Courses (CS or MATH 50000 or 60000 level)</td>
<td>12</td>
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Minimum Total Credit Hours: 32

1 Minimum 20 credit hours must at the 60000 level or above (includes required MATH courses and thesis). With permission of the advisor, maximum 12 credit hours of 50000-level Computer Science (CS) and/or Mathematics (MATH) courses may be applied toward the total required for the degree. Candidates who do not have an undergraduate degree in applied mathematics should include MATH 52031 and MATH 52045 in their program.

Graduation Requirements
Candidates for the Master of Science degree must write and defend a thesis in an area agreed upon with the faculty advisor.

Program Note
Each student should submit a detailed plan of study for approval by the advisor by the time the first 16 credit hours of graduate credit have been completed.