

APPLIED MATHEMATICS - M.A.

College of Arts and Sciences
 Department of Mathematical Sciences
 233 Mathematics and Computer Science Building
 Kent Campus
 330-672-2430
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Description

The Master of Arts degree in Applied Mathematics is emphasizes areas relevant to mathematical applications in the sciences, including engineering, biological, financial and physical sciences. There is no thesis requirement or option. Students in the Ph.D. degree in Applied Mathematics can apply for this M.A. degree after completing the requisite number of credit hours.

Fully Offered At:

- Kent Campus

Admission Requirements

- Bachelor's degree from an accredited college or university¹ for unconditional admission
- Minimum 3.000 undergraduate GPA on a 4.000 point scale for unconditional admission
- Official transcript(s)
- Résumé or vita
- Goal statement
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
 - Minimum 525 TOEFL PBT score (paper-based version)
 - Minimum 71 TOEFL IBT score (Internet-based version)
 - Minimum 74 MELAB score
 - Minimum 6.0 IELTS score
 - Minimum 50 PTE score

For more information about graduate admissions, please visit the Graduate Studies admission website. For more information on international admission, visit the Office of Global Education's admission 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 assumptions 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 university-level mathematics effectively.
6. Obtain depth in some subdiscipline of applied mathematics.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements¹		
Choose 2 sequences from the following:		13-14
MATH 60051 & MATH 60052	PROBABILITY I and PROBABILITY II	
MATH 60061 & MATH 60062	MATHEMATICAL STATISTICS I and MATHEMATICAL STATISTICS II	
MATH 62041 & MATH 62042	METHODS OF APPLIED MATHEMATICS I and METHODS OF APPLIED MATHEMATICS II	
MATH 62251 & MATH 62252	NUMERICAL ANALYSIS I and NUMERICAL ANALYSIS II	
Mathematics Graduate Courses (MATH 50000 or 60000 level) ²		12
Mathematics Graduate Courses (MATH 60000 level) ³		6
Minimum Total Credit Hours:		32

¹ A detailed plan of study should be submitted for advisor approval before the first 16 credit hours of graduate credit have been completed.

² With permission of the advisor, maximum 12 credit hours of 50000-level 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.

³ Minimum 20 credit hours must at the 60000 level or above (includes required MATH courses). Maximum 3 credit hours of MATH 67199 may be counted toward the 20 credit hours.

Graduation Requirements

Degree candidates must pass the departmental qualifying examination at the master's level in numerical analysis, probability or statistics, in addition to one additional area chosen from among the areas listed for master's degree programs.