APPLIED MATHEMATICS - M.S.

College of Arts and Sciences
Department of Mathematical Sciences
www.kent.edu/math

About This Program

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.

Contact Information

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- Connect with an Admissions Counselor: U.S. Student | International Student

Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - Kent Campus

Examples of Possible Careers and Salaries*

Data scientists and mathematical science occupations, all other

- 30.9% much faster than the average
- 33,200 number of jobs
- $98,230 potential earnings

Mathematical science teachers, postsecondary

- 1.3% slower than the average
- 60,100 number of jobs
- $73,650 potential earnings

Mathematicians

- 3.0% about as fast as the average
- 2,900 number of jobs
- $110,860 potential earnings

Natural sciences managers

- 4.8% about as fast as the average
- 71,400 number of jobs
- $137,940 potential earnings

Statisticians

- 34.6% much faster than the average
- 42,700 number of jobs
- $92,270 potential earnings

* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

Admission Requirements

- Bachelor's degree from an accredited college or university[1]
- Minimum 2.750 undergraduate GPA on a 4.000 point scale
- Official transcript(s)
- Goal statement
- Résumé or vita
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions to waive) by earning one of the following:[2]
  - Minimum 71 TOEFL iBT score
  - Minimum 6.0 IELTS score
  - Minimum 50 PTE score
  - Minimum 100 DET score

[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.

[2] International applicants who do not meet the above test scores may be considered for conditional admission.

Application Deadlines

- **Fall Semester**
  - Application deadline: March 1
- **Spring Semester**
  - Application deadline: October 1
- **Summer Term**
  - Application deadline: March 1

Applications submitted after these deadlines will be considered on a space-available basis.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements [1]		
Mathematics (MATH) Graduate Electives (50000 or 60000 level) [2]		12-13

Choose two 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	
Culminating Requirement		
MATH 67199	THESIS I [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] Minimum 20 credit hours of coursework must at the 60000-level or above (includes required MATH courses and thesis) for the degree. With permission of the advisor, students may apply a maximum of 12 credit hours of 50000-level Mathematics (MATH) courses 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] Candidates for the Master of Science degree must write and defend a thesis in an area agreed upon with their faculty advisor.

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
-	3.000

- No more than one-half of a graduate student's coursework may be taken in 50000-level courses.
- Grades below C are not counted toward completion of requirements for the degree.

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 university-level mathematics effectively.
6. Obtain depth in some subdiscipline of applied mathematics.