

PURE MATHEMATICS - M.S.

College of Arts and Sciences
 Department of Mathematical Sciences
 233 Mathematics and Computer Science Building
 Kent Campus
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Description

The Master of Science degree in Pure Mathematics is primarily a terminal, pre-professional degree comprising coursework beyond the bachelor's degree that emphasizes theoretical areas of the discipline, including algebra, analysis, geometry, number theory and topology. 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

- 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 pure mathematics; however, they are expected to have proficiency in algebra and analysis at the level of MATH 41001, MATH 41002, MATH 42001 and MATH 42002. 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. Reason in mathematical arguments at a level appropriate to the discipline, including using precise definitions, articulating assumptions and reasoning logically to conclusions.
2. Engage effectively in problem solving, including exploring examples, devising and testing conjectures and assessing the correctness of solutions.
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 a deeper understanding of some subdiscipline of mathematics.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements		
MATH 67199	THESIS I	6
Mathematics Electives		8
Mathematics Sequence Electives, choose from the following: ¹		18
MATH 61051 & MATH 61052	ABSTRACT ALGEBRA I and ABSTRACT ALGEBRA II	
MATH 62051 & MATH 62052	FUNCTIONS OF A REAL VARIABLE I and FUNCTIONS OF A REAL VARIABLE II	
MATH 62151 & MATH 62152	FUNCTIONS OF A COMPLEX VARIABLE I and FUNCTIONS OF A COMPLEX VARIABLE II	
MATH 66051 & MATH 66052	INTRODUCTION TO TOPOLOGY I and INTRODUCTION TO TOPOLOGY II	
Minimum Total Credit Hours:		32

¹ Students must complete, at minimum, two of the sequences and one semester of one of the remaining sequences. With prior permission from the Graduate Studies Committee, maximum 6 credit hours of mathematically related coursework from other departments can be applied to meet the Mathematics Sequence Electives.

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.