

APPLIED MATHEMATICS

Applied Mathematics

In addition to the General Degree Requirements as published in this Catalog, students pursuing the Master of Science Degree in Mathematics with concentrations in Pure Mathematics or Applied Mathematics must complete a minimum of thirty (30) graduate credits. For the thesis option, students are required to complete at least twenty-four (24) graduate mathematics credits and six (6) thesis related credits. For the non-thesis option Applied Mathematics concentration track, at least 24 credits of the 30 credits must be in mathematics. Up to 6 credits of areas of special applications courses are determined jointly by the interest of the graduate student in consultation with the graduate mathematics advisor and members of other departments who are formally designated as graduate faculty.

In either pure or applied concentration tracks, students must maintain a minimum cumulative grade point average of 3.0 to continue in the program.

Student Learning Outcomes

Students pursuing the Master of Science Degree in Mathematics will be able to:

1. Construct proofs of major advanced theoretical results in mathematics.
2. Use abstract mathematical reasoning and modeling to solve disciplinary and interdisciplinary problems.
3. Apply mathematical theories and concepts to conduct scholarly research in interdisciplinary areas.
4. Present mathematical research results and findings in written and oral forms for mathematical, scientific, and general audiences.

Applied Mathematics Concentration

Code	Title	Hours
Graduate Course: Applied Mathematics Concentration		
CMAT 521	Real Analysis I	3
CMAT 522	Real Analysis II	3
CMAT 523	Complex Variables I	3
CMAT 524	Complex Variables II	3
CMAT 527	Topology I	3
CMAT 541	Principles of Applied Math I	3
CMAT 542	Principles of Applied Math II	3
CMAT XXX	Graduate Mathematics Elective	3
CMAT 675	Thesis Seminar I (or CMATT XXX Graduate Elective)	3
CMAT 676	Thesis Seminar II (or CMATT XXX Graduate Elective)	3
Total Hours		30

Mathematics, M.S., with Applied Mathematics Concentration

Course	Title	Hours
First Year		
First Semester		
CMAT 521	Real Analysis I	3

CMAT 523	Complex Variables I	3
CMAT 541	Principles of Applied Math I	3
Hours		9
Second Semester		
CMAT 522	Real Analysis II	3
CMAT 524	Complex Variables II	3
CMAT 542	Principles of Applied Math II	3
Hours		9
Second Year		
First Semester		
CMAT 527	Topology I	3
CMAT 675	Thesis Seminar I (or CMAT XXX Graduate Elective)	3
Hours		6
Second Semester		
CMAT XXX	Graduate Elective in Mathematics	3
CMAT 676 or CMAT 651	Thesis Seminar II or Topics in Mathematics	3
Hours		6
Total Hours		30