

**Master of Science in
Mathematics** Date: March 1, 2017

Degree Codes: ES MS MATH

Contact: Dr. Jinko Kanno

SCH Requirements: 30 SCH (thesis option) or 36 SCH (practicum option: through a formal practicum or qualifiers)

Thesis Option: Research & Thesis SCH toward degree: 6

Practicum Option: Practicum SCH toward degree: 3

Course-work only option: Not available

There are four core areas (Applied Mathematics, Pure Mathematics, Statistics, Computing), and students must take at least one prescribed core course from at least three of the core areas. Students must check the catalog for prerequisite courses before registering for each course.

| Core category | Core Courses | SCH |
|---------------------|---|-----------------------------|
| Applied Mathematics | MATH 407 Partial Differential Equations or MATH 414 Numerical Analysis or MATH 415 Numerical Analysis | 3 |
| Pure Mathematics | MATH 435 Graph Theory or MATH 460 Number Theory or MATH 482 Introduction to Real Analysis | 3 |
| Statistics | STAT 506 Regression Analysis or STAT 507 Design and Analysis of Experiments | 3 |
| Computing | CSC 428 Object Oriented Programming and Data Structures or CSC 438 Advanced Data Structures and Algorithm Design or MATH 574 Numerical Solution for PDE I | 3 |
| Other courses | <i>The remaining courses are to be selected by the student and the advisory committee so as to provide the required background for research and a productive career.*</i> | Thesis: 21 Practicum: 27 |

| THESIS OPTION | | | | PRACTICUM OPTION | | |
|-----------------|----------|----------------------------------|-----------|-----------------------|--|-----------|
| Course Category | Number | Course Name | SCH | Number | Course Name | SCH |
| Thesis | MATH 551 | Research & Thesis in Mathematics | 6 | MATH 555 Practicum | Formal Practicum (~100 hrs work) & defense or Pass 2 Math/Stats qualifiers & presentation | 3 |
| TOTAL | | | 30 | | | 36 |

* A total of at least 15 SCH of courses need to be 500 level or above. The maximum number of variable credit Independent Study courses that can be applied towards the degree is 6 SCH. A total of up to 9 graduate hours on the entire plan of study may be chosen from a related field if approved by the Advisory Committee.