STATISTICS, MS

Degree: Master of Science (MS)
Field of Study: Statistics

Program Overview

A student must satisfy all of the general requirements of the School of Graduate Studies as well as the more specific requirements of the department to earn a master's degree. Each graduate student is assigned an academic advisor upon matriculation. The academic advisor's primary responsibility is to help the student plan an appropriate and sufficiently broad program of coursework and study that will satisfy both the degree requirements and the special interests of the student. With the aid of the academic advisor, each student must present a study plan indicating how he or she intends to satisfy the requirements for a graduate degree. Master's students completing a thesis as part of their program will also form a thesis committee, chaired by their research advisor, to advise on and evaluate both the thesis and its oral defense.

Graduate Policies

For graduate policies and procedures, please review the School of Graduate Studies section of the General Bulletin.

Program Requirements

The dual core of the MS program in statistics is mathematical statistics and modern data analysis, with the option of a special Entrepreneurial Track. Expanding from this core, students develop technical facilities in a variety of statistical methodologies. This breadth of competence is designed to equip graduates to go beyond the appropriate choice of method for implementation and to be able to adapt these techniques and to construct new methods to meet the specific objectives and constraints of new situations. The MS degree in statistics requires a minimum of 30 hours of approved coursework in statistics and related disciplines, at least 18 of which must be at the 400 level or higher. Each student's program is developed in consultation with a faculty mentor. Required courses are the following:

Code	Title	Hours
STAT 425	Data Analysis and Linear Models	3
STAT 426	Multivariate Analysis and Data Mining	3
STAT 445	Theoretical Statistics I	3
STAT 446	Theoretical Statistics II	3
STAT 455	Linear Models	3
STAT 495	Statistical Consulting and Collaboration	3
Total Hours		**18**

The student must pass a comprehensive written exam. In conjunction with a faculty mentor, the student may substitute the comprehensive examination requirement with an expository or original thesis, which will count as 6 credit hours of coursework (STAT 651). This thesis would be defended in the course of an oral examination, during which the student would be questioned about the thesis and related topics. These two variants correspond to the graduate school's Master's Non-Thesis and Master's Thesis options.

Entrepreneurial Track

The Master of Science in Statistics–Entrepreneurial Track (MSS-ET) is a professional degree designed to provide training in statistics focused on developing data analysis and decision-making skills in industrial, government, and consulting environments where uncertainties and related risks are present. It expands our master's program in statistics by creating a professional track that includes some business training. The Entrepreneurial Track provides instruction and real-world business experience to students who have a background in statistics and a vision for new and growing ventures. The MSS–ET program requires a minimum of 30 credit hours.

The required New Venture Creation and Technology Entrepreneurship courses will be offered by the Weatherhead School of Management. Students on internships will sign up for the consulting forum sequence. In addition, students are required to participate in an intensive (up to 30 hours) one-week annual workshop on the industrial use of statistics from the management perspective. This non-credit workshop will take place during the fall or spring undergraduate breaks.