Masters in Statistics: MATHEMATICS

The Masters in Statistics (Mathematics) requires a thesis project. The degree consists of 36 credit hours of graduate level classes, 3 of which should be thesis hours.

AFFILIATED FACULTY

Tom Alberts, Tom Fletcher (School of Computing), Lajos Horvath, Davar Khoshevisan, Braxton Osting, Jeff Phillips (School of Computing), Firas Rassoul-Agha, Suresh Venkatasubramanian (School of Computing).

DATA SCIENCE OPTION

Prerequisites

Math: Calculus I-III (Math 1210, 1220, 2210), Linear Algebra (Math 2270), Probability (Math 5010), or equivalent coursework.
CS: Introduction to Algorithms and Data Structures (CS 2420), Algorithms (CS 4150), or equivalent coursework.

CORE CLASSES (to be completed in the first year of study)	
Math 5080	Intro to Statistical Inference I
Math 5090	Intro to Statistical Inference II
CS 6140	Data Mining
CS 6350	Machine Learning

Electives: A total of 9 elective courses are required. Two must be taken from the Math elective list, and two must be taken from the CS elective list. The remaining electives may be taken from these lists, or from other departments on campus (subject to the approval of a student's advisor).

MATH ELECTIVES	
Math 5030	Actuarial Mathematics
Math 5040-50	Stochastic Processes & Simulation I-II
Math 5600	Survey of Numerical Analysis
Math 5610-20	Introduction to Numerical Analysis I-II
Math 5650	Topics in Numerical Analysis
Math 5660	Parallel Numerical Methods
Math 5740	Mathematical Modeling
Math 5075	Time Series
Math 5770	Introduction to Optimization
Math 6010	Linear Models
Math 6030	Multivariate Models
Math 6040	Probability
Math 6070	Mathematical Statistics
CS ELECTIVES	
CS 5530	Database System
CS 6150	Advanced Algorithms
CS 6190	Probabilistic Learning
CS 6300	Artificial Intelligence
CS 6340	Natural Language Processing
CS 6630	Visualization
CS 6961	Structured Prediction