Master of Arts in Economics
Concentration in Statistics

The core curriculum focuses on state-of-the-art modeling and data analytic skills. Elective courses allow the student to gain additional specialization in regression models, design of experiments, time series, machine learning and big data, Bayesian analysis or quality control. The degree can be completed on either a full-time or part-time basis. All required economics and statistics courses are offered in the evening.

Curriculum

Prerequisites
ECON 210 Principles of Microeconomics
ECON 211 Principles of Macroeconomics
ECON 501 Introduction to Econometrics
MATH 200 Calculus with Analytic Geometry

Core Economics Courses: 18 credits
ECON 604 Advanced Microeconomic Theory
ECON 607 Advanced Macroeconomic Theory
ECON 612 Econometrics
ECON 614 Mathematical Economics
ECON 641 Econometric Time Series Analysis
ECON 642 Panel and Nonlinear Methods in Econometrics

Core Statistics Courses: 6 credits
STAT 513 Mathematical Statistics I
STAT 514 Mathematical Statistics II

One course from approved statistics electives: 3 credits
Choose one additional approved elective in economics or from the approved statistics electives: 3 credits

Approved Statistics Electives:

Regression Models:
STAT 546 Linear Models
STAT 623 Discrete Multivariate Analysis
STAT 643 Applied Linear Regression
STAT 744 Regression II

Design of Experiments:
STAT 642 Design and Analysis of Experiments I
STAT 650 Design and Analysis of Response Surface Experiments
STAT 742 Design and Analysis of Experiments II

Time Series
STAT 613 Stochastic Processes
STAT 675 Time Series Analysis I

Machine Learning and Big Data:
STAT/OPER 636 Machine Learning Algorithms
STAT/OPER 736 Mathematics of Knowledge and Search Engines

Bayesian Analysis
STAT 645 Bayesian Decision Theory
STAT 745 Advanced Bayesian Statistics

Quality Control
STAT/OPER 648 Systems Reliability Analysis
STAT OPER 649 Statistical Quality Control