

Foundations of Data Science (MS): Mathematics Concentration

Degree Requirements

Code	Title	Hours	Counts towards
Required Courses			21
Statistics Core			
ST 503	Fundamentals of Linear Models and Regression		
ST 517	Applied Statistical Methods I		
Mathematics Core			
MA 523	Linear Transformations and Matrix Theory		
MA 542	Convex Optimization Methods in Data Science		
Computer Science core			
CSC 505	Design and Analysis Of Algorithms		
CSC 540	Database Management Concepts and Systems		
Machine Learning core (choose one of the following)			
ST 563	Introduction to Statistical Learning		
CSC 522	Automated Learning and Data Analysis		
Concentration Electives			9
A minimum of 9 hours of elective courses must be taken from the following courses:			
MA 540	Uncertainty Quantification for Physical and Biological Models		
MA 580	Numerical Analysis I		

MA 784	Numerical Methods for Nonlinear Equations and Optimization
MA 798	Special Topics In Numerical Analysis
Total Hours	30