Data Science Graduate Course Chart

Undergraduate Background

B.S. Degree in Computer Science
- CS 547/DS 547

B.S. Degree in Math
- MA 540, Probability and Mathematical Statistics I
- MA 541, Probability and Mathematical Statistics II
- MA 542, Regression Analysis
- MA 543/DS 502, Statistical Methods for Data Science
- MA 546, Design and Analysis of Experiments
- MA 547, Design and Analysis of Observational and Sampling Studies
- MA 549, Analysis of Lifetime Data
- MA 550, Time Series Analysis
- MA 552, Distribution-Free and Robust Statistical Methods
- MA 554, Applied Multivariate Analysis
- MA 556, Applied Bayesian Statistics

B.A. Degree in Business
- MIS 581, Business Intelligence
- MIS 582, Advanced Cryptography and Data Security
- MIS 583, Business Applications in Machine Learning
- MIS 584, Business Intelligence
- MIS 588, Business Applications in Machine Learning
- OTE 501, Designing Op. for Competitive Advantage
- OTE 542, Risk Management and Decision Analysis
- OTE 544, Supply Chain Analysis and Design
- OTE 552, Modeling and Optimizing Processes
- OTE 559, Opt. Methods for Business Analytics

Other
- CS 5007, Introduction to Programming Concepts, Data Structures and Algorithms
- CS 5084, Introduction to Algorithms Design and Analysis
- CS 509, Design of Software Systems
- CS 534, Artificial Intelligence
- CS 536, Programming Language Design
- CS 539, Machine Learning
- CS 541/DS 541, Deep Learning
- CS 542, Database Management Systems
- CS 545, Digital Image Processing
- CS 546, Human-Computer Interaction
- CS 547/547, Information Retrieval
- CS 548, Knowledge Discovery and Data Mining
- CS 549, Computer Vision
- CS 561, Advanced Topics in Database Systems
- CS 565, User Modeling
- CS 566, Graphical Models For Reasoning Under Uncertainty
- CS 567, Emp. Methods For Human-Cent. Computing
- CS 573, Data Visualization
- CS 584, Algorithms: Design and Analysis
- CS 585/DS 583, Big Data Management
- CS 586/DS 504, Big Data Analytics

Core Courses
- 5 courses required at least one from each category
- Additional core courses are counted as electives

Electives
- 2 or 4 courses

Or, DS-relevant special topics course, ISP, or directed study course offered by DS Affiliated Faculty

4 elective courses required

M.S. Degree in Data Science
- DS 598, Graduate Qualifying Project
- DS 599, Master's Thesis

10 courses required
No more than 13 credits from Business School

2 elective courses required

Capstone
- DS 599, Master's Thesis

Last Updated: 10/07/2019