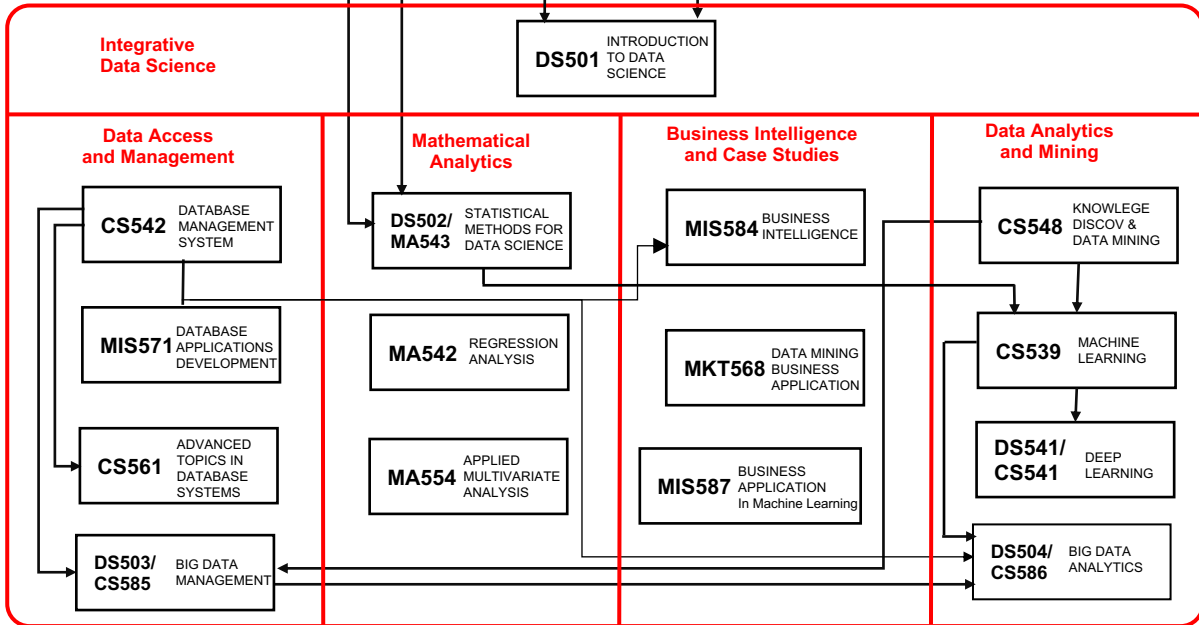


# Data Science Graduate Course Chart

Undergraduate Background



Arrow indicates recommended background



Core Courses

5 courses required at least one from each category

Additional core courses are counted as electives

Electives

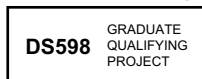
2 or 4 courses

- CS 5007. Introduction to Prog. Concepts, Data Structures and Algorithms
- CS 5084. Introduction to Algos: Design and Analysis
- CS 504. Analysis of Computations and Systems
- CS 509. Design of Software Systems
- CS 528. Mobile and Ubiquitous Computing
- CS 534. Artificial Intelligence
- CS 536. Programming Language Design
- CS 539. Machine Learning
- CS 541/DS541. Deep Learning
- CS 542. Database Management Systems
- CS 545. Digital Image Processing
- CS 546. Human-Computer Interaction
- CS 547/DS 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 503. Big Data Management
- CS 586/DS 504. Big Data Analytics
- MA 511. Applied Statistics For Eng. & Scientists
- MA 529. Stochastic Processes
- 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
- ACC 500 Accounting and Finance Fundamentals.
- ACC 502 Financial Intelligence and Strategic Decision-Making
- ACC 505 Perform. Measurement and Mang.
- BUS 500 Buss. Law, Ethics and Social Resp.
- FIN 500 Financial Information and Management
- FIN 503 Financial Decision Making for V. Creation
- FIN 504 Financial Statement A. and Valuation
- MIS 500 Innovating with Information Systems
- MIS 571 Database Applications Development
- MIS 573 Systems Design and Development
- MIS 576 Project Management
- MIS 581 Information Tech. Policy and Strategy
- MIS 583 User Experience Applications
- MIS 584 Business Intelligence
- MIS 585 User Experience Design
- MIS 587. Business Applications in Machine Learning
- MKT 568 Data Mining Business Applications
- OBC 505 Teaming and Organizing for Innovation
- OBC 506 The Heart of Leadership: Power...
- OIE 501 Designing Op. for Competitive Advantage
- OIE 542 Risk Management and Decision Analysis
- OIE 544 Supply Chain Analysis and Design
- OIE 552 Modeling and Optimizing Processes
- OIE 559 Opt. Methods for Business Analytics
- PSY 505. Advanced Methods and Analysis for the Learning and Social Sciences
- BCB 501. Bioinformatics
- BCB 502/CS 582. BioVisualization
- BCB 503/CS 583. Biological and Biomedical Database Mining
- BCB 504/MA 584. Statistical Methods in Genetics and Bioinformatics
- BME 595. Special Topics: Machine Learning for Biomedical Informatics
- ECE 502. Analysis of Probabilistic Signals And Systems
- ECE 503. Digital Signal Processing
- ECE 504. Analysis of Deterministic Signals And Systems
- ECE 578/ CS 578. Cryptography and Data Security
- ECE 630. Advanced Topics in Signal Processing
- ECE 673. Advanced Cryptography
- ECE 5311. Information Theory and Coding

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

Capstone

4 elective courses required



OR

2 elective courses required



10 courses required  
No more than 13 credits from Business School