

MS in Data Science

Admission

Students may be admitted in full graduate standing to the MS in data science program if they have a bachelor's degree in computer science or any related engineering discipline (please see required topics below), a GPA of at least 3.000, and also meet the Graduate School's other requirements. Students who have a bachelor's degree in other quantitative disciplines (mathematics, physics or other disciplines) with demonstrated quantitative skills (calculus, linear algebra, etc.) and proficiency in computer programming may be admitted on a conditional basis.

Application materials will be reviewed by the Graduate School and the MS in data science graduate coordinator, after which the student will be notified of their decision. Students entering the MS in data science program are expected to have already completed courses in programming, linear algebra, statistics and data structures. If prior coursework deficiencies exist, then the student may be admitted on a conditional basis. It is recommended that deficiencies are completed prior to beginning graduate studies.

Program Requirements

Course	Title	Hours
Core Courses		
CS 746	Perspectives on Data Science	3
BSAN 775	Perspectives on Business Analytics	3
MATH 746	Introduction to Data Analytics	3
CS 697AB	Machine Learning	3
CS 896	Capstone Project in Data Science	3
Data Science Elective Courses		
<i>Select 9 credit hours from the list of classes below.</i>		9
CS 665	Introduction to Database Systems	
CS 771	Artificial Intelligence	
CS 797I	Introduction to Bioinformatics	
CS 898AS	Deep Learning: Theory, Algorithms and Applications	
CS 898AJ	Algorithmic Techniques for Big Data Analysis	
CS 898BE	Advanced Topics in Machine Learning	
CS 898CA	Introduction to Intelligent Robotics	
CS 898BA	Image Analysis and Computer Vision	
CS 898AW	Artificial Intelligence for Robotics	
CS 898D	Data Mining	
CS 898BD	Deep Learning	
Discipline Elective Courses		
<i>Select 6 credit hours from the list of classes below.</i>		6
Any of the courses listed in Data Science Electives.		
MIS 750	Business Intelligence and Analytics	
STAT 763	Applied Regression Analysis	
STAT 764	Analysis of Variance	
STAT 776	Applied Statistical Methods II	

IME 780AP	Neural Networks and Machine Learning	
IME 869	Bayesian Statistics and Uncertainty Quantification	
SMGT 800	Analytics and Decision Making In Sport	
IME 780AN	Big Data Analytics in Engineering ¹	
IME 734	Introduction to Data Mining and Analytics ²	
MIS 884	Database Planning & Management	
BSAN 875	Advanced Business Analytics	
Total Credit Hours		30

¹ If CS 898AJ not taken.

² If CS 898D not taken.

Applied Learning

Students in the MS in data science program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the mandatory course CS 896 Capstone Project in Data Science.