

# Doctor of Philosophy in Data Science & Analytics

Updated 9/8/2020 by 8267

	Admission to Program	3	
MATH 8020: Graph Theory	Admission to Program	3	
MATH 8030: Applied Discrete & Combinatorial Mathematics	Admission to Program	3	
Data Analysts			
STAT 8240: Data Mining I	Admission to Program		

## Computer Science Concentration

Students interested in pursuing a concentration in Computer Science must take at least 15 credit hours in CS courses 8000 or 9000 levels (except CS 9900).

Course Number/Title	Prerequisite	Credits	
CS 8025: Advanced Operating Systems	Admission to Program	3	
CS 8027: Advanced Networking & Architecture	Admission to Program	3	
CS 8041: Advanced Theory of Computation	Admission to Program	3	
CS 8045: Advanced Design and Analysis of Algorithms	Admission to Program	3	
CS 8050: Principles of Software Design & Programming Languages	Admission to Program	3	
CS 8125 Advanced Cloud Computing	Admission to program	3	
CS 8172 Advanced Parallel and Distributed Computing	CS 8025 (may take concurrent)	3	
CS 8253 Advanced Graph Algorithms	CS 8045 (may take concurrent)	3	
CS 8260 Advanced Database Systems and Applications	Admission to program	3	
CS 8263 Advanced Information Retrieval	CS 8045 (may take concurrent)	3	
CS 8265: Advanced Big Data Analytics	Admission to program	3	
CS 8267: Advanced Machine Learning	Admission to program	3	
CS 8347 Advanced Natural Language Processing	CS 8041 (may take concurrent)	3	
CS 8357 Advanced Neural Networks and Deep Learning	CS 8045 (may take concurrent)	3	
CS 8367 Advanced Computer Vision	CS 8045 (may take concurrent)	3	
CS 8375 Advanced Artificial Intelligence	CS 8045 (may take concurrent)	3	
CS 8540 Advanced Network Security	CS 8027 (may take concurrent)	3	
CS 8545 Advanced AI for Security and Privacy	CS 8045 (may take concurrent)	3	
CS 8990 Advanced Special Topics in Computer Science	Depends on topic	3	
CS 8992 Advanced Directed Studies	Admission to program	1-3	
CS 8998 Advanced Research in Computer Science	Varies	1-3	

## Statistics Concentration

Students interested in pursuing a concentration in Statistics must take at least 15 credit hours in STAT courses at 8000 or 9000 levels.

Course Number/Title	Prerequisite	Credits	
STAT 8220: Time Series Forecasting	STAT 7020 & STAT 7210	3	
STAT 8320: Applied Multivariate Data Analysis	STAT 7220 & STAT 7210	3	
STAT 8330: Applied Binary Classification	STAT 7210	3	
STAT 8350 Structural Equation Modeling	Admission to Program	3	
STAT 8450: Multilevel Statistical Modeling	Admission to Program	3	