**BS in DATA SCIENCE**  Degree Requirements  

*2021-2022*

## Premajor Requirements

*C or better in each course, and a minimum 3.0 average GPA (overall and within pre-major courses) required to apply for full major status.

1. CS 1400, Intro to Comp Prog__________ (3)  
2. CS 1410, Intro to OOP________________ (4)  
3. CS 1420, Accel OOP__________________ (4)  
4. Math 1310, Engineering Calculus I (QR) (4)  
5. Math 1320, Engineering Calculus II (QR) (4)

## Core Data Science

2.5 GPA required to graduate.

1. DS 4140, Data Mining_________________ (3)  
2. DS 4350, Machine Learning___________ (3)  
3. DS 4530, Database Systems___________ (3)  
4. DS 4630, Visualization for Data Science (3)

## Elective - Data Analysis Breadth

Must choose 3 classes. 2.5 GPA required to graduate. Below are pre-approved options.

1. CS 3540, Human Computer Interactions (3)  
2. CS 4300, Artificial Intelligence_________ (3)  
3. CS 4640, Image Processing Basics_______ (3)  
4. Math 5010, Intro to Probability__________ (3)  
5. Math 5040, Stochastic Processes 1________ (3)  
6. Math 5080, Statistical Inference 1________ (3)  
7. Math 5090, Statistical Inference 2________ (3)  
8. Math 5770, Optimization________________ (3)
9. CS 5150, Advanced Algorithms__________ (3)  
10. CS 5340, Natural Language Processing____ (3)  
11. CS 5635, Visualization for Scientific Data (3)

## Elective - Data Domain

Must choose 3 classes from this link  
1. ____________________________ (3)  
2. ____________________________ (3)  
3. ____________________________ (3)

## Capstone Requirements

Choose ONE set (to be replaced with DS-specific ones):  
1. DS 4800, Senior Capstone Design________ (3)  
2. DS 4850, Senior Capstone Project________ (3)

or  
1. DS 4940, Undergraduate Research________ (3)  
2. DS 4970, Bachelors Thesis______________ (3)

*Must reach total of at least 122 credit hours. This degree requires at least 108 hours.  
All DS required courses must be passed with a C or better.*