DATA SCIENCE, BACHELOR OF SCIENCE (5012)

Program Coordinator

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The Bachelor of Science in Data Science program equips students with a comprehensive understanding of the interdisciplinary field of data science. This program merges computer science, statistics, and domainspecific knowledge to harness the power of data for informed decisionmaking and innovative problem-solving. Through a combination of theoretical coursework, hands-on projects, and real-world applications, students will graduate with the skills necessary to excel in the rapidly evolving landscape of data-driven industries.

To earn the degree, the students have to complete a core set of classes and at least one certificate or a minor. The students will have an opportunity to personalize the degree by choosing one or multiple certificates that align with their interests.

Program Highlights:

- Interdisciplinary Approach: Our program seamlessly integrates concepts from business data analytics, economics, computer science, mathematics, and domain-specific areas, providing students with a holistic perspective on data science.
- Strong Foundation: Students will develop a solid foundation in programming, database management, statistical analysis, and machine learning techniques.
- Data Visualization: Learn to create compelling visualizations that effectively communicate complex insights to both technical and non-technical audiences.
- Industry-Standard Tools: Gain proficiency in popular tools and technologies used in the field, such as Python, R, SQL, and data manipulation libraries.
- Capstone Project: Culminate your learning journey with a capstone project where you will tackle a real-world problem using data-driven approaches under the guidance of faculty mentors.
- Career Preparation: Receive guidance on resume building, interview techniques, and job search strategies, and access our strong network of alumni working in various data science roles.
- Career Opportunities: Graduates of the program will be well-prepared for a wide range of careers in the data science field, including but not limited to:
 - Data Analyst
 - · Machine Learning Analyst
 - Business Intelligence Analyst
 - · Quantitative Analyst
 - Predictive Modeler
 - Market Research Analyst
 - Data Scientist

Program Requirements (51-61 hours)

Code	Title	Hours
Core Courses		42
BDAN 250	Introduction to Analytics	3

BDAN 310	Business Data Analytics	3
BDAN 350	Data Management	3
BDAN 420	Predictive Modeling	3
CS 180	Computer Science I	4
DATA 301	Big Data with its Applications	3
ECON 206	Statistics	3
ECON 465	Regression and Econometric Analysis	3
ECON 487	Data Methods in Economics	3
MATH 136	Calculus I	4
MATH 306	Applied and Computational Linear Algebra	3
STAT 330	Introduction to Statistical Software	3
DATA 399	Career Readiness in Data Science (Career Readiness)	1
DATA 499	Senior Assessment - Data Science (Senior Seminar)	3

Select a block of electives from one of the options below

Code	Title	Hours
Courses leading to the A	pplied Analytics Certificate	9
BDAN 305	Data Modeling and Analysis	3
Select two courses		6
BDAN 330	Structured Data Analysis	
BDAN 410	DSS Analysis and Design	
BDAN 430	Data Visualization	
Courses Leading to the	Applied Statistics Minor	9
STAT 402	Experimental Design	3
MATH 382	Probability and Statistics I	3
MATH 482	Probability and Statistics II	3
Courses Leading to the	Computer Science Minor	16
CS 290	Computer Science II	4
CS 351	Database Management Systems I	3
Three 300- or 400-level 0	CS course not already in the program	9
Courses Leading to the I	Economic Data Analytics Certificate	9
ECON 307	Financial Data Modeling	3
ECON 480	Economic Forecasting	3
ECON 486	Applied Statistical Methods in	3
	Economics	
Courses Leading to the	14	
GISC 316	Geographic Information Systems I	4
GISC 317	Geographic Information Systems II	4
GISC 417	GIS Analysis & Modeling	3
GISC 419	GIS Programming	3
Courses leading to the H	lealth Informatics Certificate	18-19
BDAN 305	Data Modeling and Analysis	3
BDAN 330	Structured Data Analysis	3
HIM 230	Computer Systems and	3
	Applications in Health Information Management	
HIM 330	Electronic Health Record Systems	3
HIM 430	Health Data Management and Analytics	3

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