

# DATA SCIENCE, CERTIFICATE

## Program Description

The certificate provides students with the knowledge and skills to review and integrate big data sets and provide visual representation of results. The program mixes statistical analysis with data preparation to provide visual results to questions. The program includes coding skills specifically for Big Data.

## Mission

The Data Science Certificate educates students in theoretical and practical concepts related to Big Data. Students develop data connections and use analytical techniques to answer specific questions related to the data.

## Program Goals

- Prepare students to enter the field of data science
- Prepare students to extend data analysis through the use of data science methods

## Program Specific Information

This certificate may be applied as an option for the M.S. Computer Information Science, M.S. Cybersecurity or M.S. Economic Crime Forensics programs.

## Degree or Certificate Earned

Certificate

## Required for Program Completion

- Courses
  - 5
- Credits
  - 15
- GPA
  - 3.0

## Student Learning Outcomes

- Explain data relationships based on real world variables
- Use statistical methods to develop data models
- Construct and transform views of relevant data sources based on independent variables
- Prepare data learning based on data views

## Academic Requirements

Code	Title	Credits
CIS 523	Data Processing and Database Management	3
CIS 658		3
ANA 615	Optimization Methods for Data Analytics	3
CIS 633	Data Analysis with R	3
CIS 654	Artificial Intelligence	3
<b>Total Credits</b>		<b>15</b>

## Course Sequence

Course	Title	Credits
<b>First Year</b>		
<b>First Semester</b>		
CIS 523	Data Processing and Database Management	3
CIS 633	Data Analysis with R	3
		<b>Credits</b>
		<b>6</b>
<b>Second Semester</b>		
CIS 654	Artificial Intelligence	3
ANA 615	Optimization Methods for Data Analytics	3
		<b>Credits</b>
		<b>6</b>
<b>Third Semester</b>		
CIS 658		3
		<b>Credits</b>
		<b>3</b>
		<b>Total Credits</b>
		<b>15</b>

## Faculty

Director: Margaret M. McCoe, M.S.  
 Associate Professors: Blum, Redmond, Wang  
 Assistant Professors: McCoe, Yin  
 Lecturers: Casey, Crossen, McGinley, McManus

## Program Contact Information

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## Staff Contact Information

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