DATA SCIENCE

Official Certificate Program



Central to Generating Insight from Data.

Central's Data Science Official Certificate Program (OCP) provides current professionals and students with an overview of data science methods and models. Successful students will be able to apply these techniques to large data sets. Other topics covered include web and text mining, mining for genomics and proteomics, and current issues in data science.

Curriculum

Students in the Data Science OCP are required to complete 3 core courses and 2 elective courses for a total of 20 credits.

Required Core Courses (12 credits)

- Introduction to Data Science
- Predictive Analytics: Estimation and Clustering
- Predictive Analytics: Classification

Elective Courses Choose 2 (8 credits)

- Multivariate Analytics
- Introduction to Bioinformatics
- Mining Gene and Protein Expression Data
- Biomarker Discovery
- Text Analytics with Information Retrieval
- Text Analytics with Natural Language Processing
- Advanced Estimation Methods
- Advanced Clustering Methods
- Advanced Classification Methods
- Predictive Modeling for Insurance Data
- Web Data Science
- Distributed Computing
- Topics in Artificial Intelligence
- Topics in Database Systems and Applications

Program Features

- Starts every January and August
- 20-credit program
- Attend full- or part-time
- 100% onlince classes
- No GMAT/GRE required

CENTRAL CONNECTICUT STATE UNIVERSITY

ccsu.edu/grad | 860.832.2350 | graduateadmissions@ccsu.edu

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What You'll Gain

- Apply data science using a systematic process, by implementing an adaptive, iterative, and phased framework to the process, including the research understanding phase, the data understanding phase, the exploratory data analysis phase, the modeling phase, the evaluation phase, and the deployment phase
- Evaluate the true consequences of making false positive or false negative decisions
- Demonstrate proficiency with leading open-source analytics coding software such as R and Python, as well as commercial platforms
- Understand and apply a wide range of clustering, estimation, prediction, and classification algorithms including k-means clustering, Kohonen clustering, classification and regression trees, logistic regression, k-nearest neighbor, multiple regression, and neural networks
- Learn more specialized techniques in bioinformatics, text analytics, algorithms, and other current issues

DID YOU KNOW?

The average annual wage of data scientists and mathematical science occupations in May 2020 in Connecticut was $95k.

Source: bls.gov

Applying for Admission

For consideration, applicants must submit the following:

1. A completed online application with supplemental materials (ccsu.edu/apply):
   - Essay of 500-1,000 words focusing on academic and work history, reasons for pursuing degree, where and how prerequisite courses were completed
   - Letter of recommendation from either an academic or work source
2. Official undergraduate and graduate transcripts from a regionally accredited institution of higher education (GPA of 3.00 or higher, conditional admission may be granted to candidates with undergraduate GPAs between 2.40 and 2.69)
   - Students must have a grade of B or better in two applied statistics courses (such as CCSU's STAT 200/201, or STAT 104/453, or STAT 215/216)

Official transcripts may be sent directly to the Graduate Recruitment & Admissions Office:

By Mail: Central Connecticut State University
Graduate Recruitment & Admissions Office
1615 Stanley Street
Davidson Hall 116
New Britain, CT 06050

By Email: graduateadmissions@ccsu.edu

ABOUT CENTRAL:
Central Connecticut State University is the largest university within the Connecticut State Colleges and Universities system. Founded in 1849, Central is also the state's oldest publicly funded university. Our campus is located in New Britain, Connecticut. Central is accredited by the New England Commission of Higher Education (NECHE).



10/22

Information is subject to change. Please visit our website or contact graduate admissions for the most up to date information.