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School: [Volgenau School of Engineering](#)

Department: [Interdisciplinary Programs](#)

This certificate program provides a broad overview of the end-to-end value chain for Big Data Analytics, from the capture and management of the data, through the analytics that harness the data to create value. The program is designed to provide a framework for the methodologies for organizing and integrating disparate data, analyzing and visualizing the integrated data, and determining what decisions or actions should be taken to generate value from the data. The program is comprised of 12 credits of required coursework.

The certificate is intended for students who are interested in addressing the challenge of transforming the massive data arising in applications such as business analytics, cyber defense/forensics, energy, finance, genomics, healthcare, intelligence, law enforcement, or transportation, into meaningful information. The program is intended for graduate students in areas where applications of big data may arise.

The graduate certificate may only be pursued on a part-time basis.

## Admissions Requirements

Applicants should have an undergraduate degree from an accredited institution, with a GPA of at least 3.00 in their last 60 credits of study. While no specific undergraduate degree is required, a background in engineering, business, computer science, math, information technology, is desirable, or alternatively strong work experience with data or analytics may be used.

## Certificate Requirements

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The following four courses (12 credits) must be completed with a grade of B or better:

List four courses:

CS 504 Principles of Data Management and Mining

OR 531 Analytics & Decision Analysis

STAT 515 Applied Statistics & Visualization for Analytics

AIT 580 Big Data & Advanced Analytics

**Total: 12 credits**

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