



Data Analytics

Data analytics is science of using data, techniques and tools to drive patterns, which can help end user on decision-making. Primary objective of data analytics is to address specific questions or challenges that are relevant to an organization to drive better business outcomes. In today's business and workforce landscape, making data informed strategic decisions is crucial. Whether an organization aims to gain a deeper understanding of its consumers, optimize processes, or generate new business opportunities, knowing how to leverage data can yield significant benefits. The data analytics program at Virginia State University is housed in the Department of Engineering and offered in partnership with other departments at the university, including Computer Science and Mathematics. Our master's degree program provides a deeper understanding of the methods of data analytics and will meet the needs of students making them ready to help businesses in a wide range of industries with data management and make data-driven decisions.

Admission Requirements

In addition to the Graduate Office admission requirements, criteria for non-conditional admission to the program will be set by the Departmental Computer Science Graduate Committee. Any student failing to maintain a 3.0 cumulative grade point average (GPA) in a 4.0 scale will be on academic probation for one semester. If the student's cumulative average does not return to 3.0 at the end of the probation semester, the student will be required to leave the program.

Program Requirements

The Master of Science degree requires 30 graduate credit hours of course work including a thesis or 33 graduate credit hours of course work including a project. The program is intended to satisfy the need to train professionals with expertise using modern computing tools and cutting-edge technology as well as practical knowledge of theoretical computer science. Students will focus on such areas as data mining, scientific computing, data visualization, or state-of-the-art graphics and animation technologies. Undergraduates are prepared to learn to use the latest advanced applications, while graduates are highly-trained professionals ready to begin work using such applications.

There are two options for completing the Master's Degree in Computer Science. Each course work (core or elective) is a three-credit hour course.

The Thesis Option

1. Twenty-four (27) credit hours of course work (6 core courses and any 3 courses from set of predetermine electives); and
2. Six credit hours of *thesis* work:

Courses	Credit Hours
6 Core Courses	18
3 Electives Courses	9
Thesis I & II (DAAN 600 and DAAN 601)	6
Total	33

The Non-thesis Option

1. Twenty-seven credit hours of course work (6 core courses and any 3 courses from set of predetermine electives)
2. A Master's project (DAAN 605 Graduate Data Analytics Project)

Courses	Credit Hours
6 Core Courses	18
3 Electives Courses	9
Project (DAAN 605)	3
Total	30

Program Requirements

Core Courses:

Each core course is a 3-credit hour course. All students must take the following four courses:

- Advanced Programming for Data Analytics (DAAN 500)
- Data Analytics I (DAAN 510)
- Data Analytics II (DAAN 511)
- Advanced Information Visualization (DAAN 520)
- Ethics in Data Analytics (DAAN 530)
- Mathematical Statistics (STAT 562)

Electives:

Each of elective courses is 3-hour course

- Big Data Analytics (DAAN 545)
- Sport Data Analytics (DAAN 560)
- Financial Analytics (DAAN 562)
- Special Topics in Data Analytics (DAAN 640)
- Introduction to Machine Learning (CSCI 503)
- Advanced Artificial Intelligence (CSCI 602)
- Data Mining (CSCI 695)
- Machine Learning with Big Data (CSCI 810)
- Introduction to Blockchain (CSCI 830)
- Introduction to Predictive Analytics (STAT 601)
- Bayesian Statistics (STAT 610)

Program Contact

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