Master of Science in Applied Data Science

About This Program

The Master of Science in Applied Data Science with a concentration in statistics will train students in statistical methodologies, data science, big data analytics, and machine learning. A primary objective of this track is to prepare students for work in industry through an emphasis on cutting-edge methods commonly used to solve real-life problems. The curriculum will focus on applied statistics and data science (contrasted with theoretical statistics) and is designed for hands-on experience through in-class learning and opportunities for research project internships in different settings. Students will increase their breadth of knowledge of statistical research, machine learning, deep learning and big data analytics, and will be proficient in various programming languages at a suitable level for data analysis. The program includes a 3-semester credit hour (SCH) capstone project or professional internship that will allow students to experience the entire process of analyzing a given problem, starting with problem conception all the way to product delivery. The program is designed for students with a wide range of backgrounds, including STEM degrees and those with non-technical backgrounds, such as business majors. The program can be completed in 18 months (full-time students may complete it in 12 months).

Competencies

1. Upon completion, students will be able to apply statistical methodologies to real-world data from diverse applications.
2. Upon completion, students will be able to design experiments.
3. Upon completion, students will understand the computational foundations of big data analytics, apply machine-learning and deep learning to a wide range of learning tasks, and work effectively across diverse disciplines.

Admissions Criteria

All applicants for the Applied Data Science MS must meet UT Arlington's graduate admission requirements (https://catalog.uta.edu/academicregulations/admissions/graduate/). The program does not consider GRE scores in evaluating candidates for admission.

To be considered for admission, applicants must demonstrate undergraduate preparation equivalent to a baccalaureate degree in natural, physical, or social sciences, technology, engineering, mathematics, business, or related fields. To apply for a specific track, applicants must demonstrate sufficient background in that concentration with a relevant bachelor's degree

Applicants must submit two letters of recommendation from evaluators who can assess the candidate's potential for academic success.

UNCONDITIONAL ADMISSION

Applicants who demonstrate a GPA of 3.0 and strong support from references will be considered for unconditional admission. Applicants with a GPA of 2.7 or higher (but less than 3.0) who demonstrate relevant work experience and/or certification may be offered unconditional admission upon review.

All admitted students must complete the program's self-paced, non-credit online review, "Math Foundation of Machine Learning," prior to enrolling in classes.

Curriculum

Foundations		
ASDS 5301	STATISTICAL THEORY AND APPLICATIONS	3
ASDS 5302	PRINCIPLE OF DATA SCIENCE	3
ASDS 5303	STATISTICAL AND SCIENTIFIC COMPUTING I	3
ASDS 6306	INTERNSHIP/CAPSTONE RESEARCH PROJECT	3
General Applied Data Science Specialization		
ASDS 5304	APPLIED MULTIVARIATE STATISTICAL ANALYSIS	3
ASDS 5306	APPLIED TIME SERIES ANALYSIS IN DATA ANALYTICS	3
Select one from the following:		3
ASDS 6301	ADVANCE REGRESSION ANALYSIS	
ASDS 6302	MACHINE LEARNING WITH APPLICATIONS	
Select one from the following:		3
ASDS 6303	DATA MINING WITH INFORMATION VISUALIZATION	
ASDS 6305	STATISTICAL AND SCIENTIFIC COMPUTING II	
Applied Data Science Electives		
Select 6 hours from the following:		6
ASDS 5305	DEEP LEARNING AND ARTIFICIAL NEURAL NETWORKS	
ASDS 6300	SPECIAL TOPICS	

ASDS 6301	ADVANCE REGRESSION ANALYSIS
ASDS 6302	MACHINE LEARNING WITH APPLICATIONS
ASDS 6303	DATA MINING WITH INFORMATION VISUALIZATION
ASDS 6304	OPTIMIZATION AND BIG DATA ANALYTICS
ASDS 6305	STATISTICAL AND SCIENTIFIC COMPUTING II
ASDS 5100	INDEPENDENT STUDY
Total Hours	**30**

Advising Resources

UNDERGRADUATE AND GRADUATE ADVISING

Location:

Life Science Building Room 206A and 206B

Email:

data.advising@uta.edu

Phone:

817-272-1512

Web:

Speak to an advisor in the Division of Data Science or schedule an appointment. (https://www.uta.edu/academics/schools-colleges/science/departments/division-data-science/advising/)