Post-Baccalaureate Certificate in Big Data Management and Data Sciences

About This Program

The Department of Computer Science and Engineering offers graduate certificate options to current UTA graduate students and candidates not currently enrolled at UTA who hold at least a BS degree or equivalent. Most completed certificate coursework can be applied toward a UTA CSE master's or PhD degree.

The Graduate Certificate in Big Data Management and Data Sciences is a credit-bearing, degree-leading credential designed to provide students with a strong technical foundation in managing, processing, and analyzing large-scale data. The program equips students with the theoretical and practical skills necessary to work with complex datasets using modern data science methodologies and technologies.

The core competencies described here show what a student should know or have upon completion of the certificate requirements.

Competencies

1. Upon completion, students will demonstrate an ability to understand fundamental concepts of big data management and data sciences, such as data storage and management, and data analysis and mining.
2. Upon completion, students will demonstrate knowledge of current topics in large scale data analysis, such as relational and non-relational data management, big data analytics, data mining, machine learning, cloud computing, software tools for big data, Web data, and social and information networks.
3. Upon completion, students will demonstrate an ability to apply this knowledge to subject areas, such as business analytics, computational science, health informatics and bioinformatics, and social networks data.

Admissions Criteria

CSE certificate students are expected and required to have sufficient background knowledge for the program by way of undergraduate preparation equivalent to a baccalaureate degree in Computer Science or Computer Engineering or in a technical field relevant to the CSE curriculum. Sufficient background can include, but is not limited to, holding a degree in computer science, computer engineering, or information systems or having gained the requisite background knowledge through active employment in computer science or information technology related fields. Students without a proper academic background, as determined by the graduate advisor at the time of the admission review, will be required to complete CSE 5305 Foundations of Graduate Level Studies in Computer Science and earn a passing grade in addition to the other required graduate courses.

Should a certificate student wish to continue on to an MS or PhD degree program in the CSE department, most certificate courses may be used toward that advanced degree. Note that for admission to the MS degree program, all UTA and CSE graduate degree admission requirements would need to be met.

Current UTA students should contact CSEGradAdvising@uta.edu to request admission to the certificate program. Individuals not currently enrolled at UTA can apply for the certificate via ApplyTexas (https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.applytexas.org%2Fadappc%2Fgen%2Fc_start.WBX&data=05%7C02%7Cdickens%40uta.edu%7C2baae0d3a6a9470ee8e308dd90434c51%7C5cdc5b43d7be4caa8173729e3b0a62d9%7C0%7C0%7C638825340889558519%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=TYpVJ5INFycjd8eztYS9pQ3ICJ%2Fn40%2FSewZkrb%2F3bOE%3D&reserved=0).

Curriculum

CSE 5301	DATA ANALYSIS & MODELING TECHNIQUES	3
CSE 5334	DATA MINING	3
CSE 6331	ADVANCED TOPICS IN DATABASE SYSTEMS	3
CSE 6363	MACHINE LEARNING	3
Total Hours		**12**

Program Completion

A grade of C or better and an overall GPA of 3.0 or higher is required in all courses counted towards the completion of the certificate. The certificate program consists of 4-5 existing courses. Students enrolled in the certificate program will take courses with students studying for master’s and/or PhD programs in the CSE Department.

Advising Resources

Graduate students should consult a graduate advisor as needed

Location:

Engineering Research Building 6th Floor

Email:

csegradadvising@uta.edu

Phone:

N/A

Web:

Graduate Advising (https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/cse/students/graduate-advising/)