Post-Baccalaureate Certificate in Unmanned Vehicle Systems (Computer Science and Engineering)

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 Unmanned Vehicle Systems (UVS) is a credit-bearing, degree-leading program designed to prepare students with the interdisciplinary knowledge and practical skills necessary for the design, development, and operation of autonomous and remotely operated vehicles. The program covers a broad range of unmanned systems, including Unmanned Aerial Systems (UAS), Unmanned Ground Systems (UGS), and Unmanned Maritime Systems (UMS).

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 the knowledge and skills required for the design, development, and operation of UVS including UAS (Unmanned Aerial Systems), UGS (Unmanned Ground Systems) and UMS (Unmanned Maritime Systems).
2. Upon completion, students will demonstrate an ability to understand the common aspects of UVS, including sensors, actuators, communications, powering, and more importantly, decision#making capabilities (autonomy), while also covering development of domain#specific mobile platforms such as airplane, rotorcraft, and Ackerman steering car and boat.
3. Upon completion, students will demonstrate an ability to provide the UVS industry with a knowledgeable, locally available workforce.

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 5360	ARTIFICIAL INTELLIGENCE I	3
CSE 5364	ROBOTICS	3
CSE 5383	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	3
CSE 5384	UNMANNED VEHICLE SYSTEM DEVELOPMENT	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/)