

# Certificate in Unmanned Vehicle Systems (Computer Science)

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## About This Program

The Certificate in Unmanned Vehicle Systems (UVS) for Computer Science majors will educate undergraduate students in the knowledge and skills required for design, development and operation of UVS including Unmanned Aircraft Systems (UAS), Unmanned Ground Systems (UGS), and Unmanned Maritime Systems (UMS). The certificate program will emphasize the common aspects of UVS such as sensors, actuators, communications, and more importantly, decision-making capabilities (autonomy). This program aims at the dual goal of providing the UVS industry with a knowledgeable, locally available workforce and developing career opportunities for its participants. To this end, the Certificate in UVS will be awarded concurrently with an undergraduate degree.

## Competencies

1. Upon completion, the students will be able to apply "systems thinking" to design an autonomous vehicle to satisfy specific mission requirements.
2. Upon completion, the students will be able to integrate sensors, actuators, and software on a mobility platform.

## Admissions Criteria

The certificate is open to all degree-seeking students. Students who are not a part of an engineering professional program should contact a CSE advisor for permission.

## Curriculum

### UVS Foundations

CSE 4378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	3
CSE 4379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	3

### CSE Specialization

CSE 4308	ARTIFICIAL INTELLIGENCE	3
CSE 4360	AUTONOMOUS ROBOT DESIGN AND PROGRAMMING	3

Select 1 from the following: 3

CSE 4309	FUNDAMENTALS OF MACHINE LEARNING	
CSE 4310	FUNDAMENTALS OF COMPUTER VISION	

**Total Hours** 15

## Program Completion

A combined GPA of 3.0 or better must be earned on all courses used to satisfy the certificate requirements.

## Advising Resources

First time in college students meet with engineering advisors in the UAEC (UAECengineering@uta.edu). Transfer students are advised prior to New Maverick Orientation by the department. Students, please read all student emails carefully and consult the department advising webpage for additional contact information and answers to common questions.

### Location:

ERB 6th Floor: ERB 643, ERB 644, ERB 645, ERB 646, ERB 622A

### Email:

cseugadvising@uta.edu

### Phone:

817-272-3785

### Web:

Find our contact information, walk-in advising schedule, and virtual appointment links here (<https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/cse/students/undergraduate-advising/>)