Undergraduate Certificate in Unmanned Vehicle Systems

About This Program

The Certi#cate in Unmanned Vehicle Systems (UVS) 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 certi#cate program will emphasize the common aspects of UVS. 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.

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

Admission to a professional engineering or science program.

Curriculum

Required		
Introductory Course (3 hours)		3
Choose 1 of the following:		
CSE 4378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	
EE 4378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	
IE 4378	INTRODUCTION TO UNMANNED VEHICLES SYSTEMS	
MAE 4378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	
Projects Course (3 hours)		3
Choose 1 of the following:		
Note: these require a 'B' or better in the Introductory Course		
CSE 4379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	
EE 4379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	
IE 4379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	
MAE 4379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	
Electives (6 hours)		**6**
Select 2 courses from one (1) of the following groups:		
CSE group		
CSE 3442	EMBEDDED SYSTEMS I	
CSE 4308	ARTIFICIAL INTELLIGENCE	
CSE 4360	AUTONOMOUS ROBOT DESIGN AND PROGRAMMING	
EE group		
EE 4314	CONTROL SYSTEMS	
EE 4315	INTRODUCTION TO ROBOTICS	
IE group		
IE 3351	FUNDAMENTALS OF SYSTEMS ENGINEERING	
IE 4325	AUTOMATION AND ROBOTICS FOR SERVICE AND MANUFACTURING SYSTEMS	
MAE group		
MAE 3318	KINEMATICS AND DYNAMICS OF MACHINES	
MAE 4345	INTRODUCTION TO ROBOTICS	
Note: Any 3000/4000-level engineering or science course may be substituted with prior approval of academic advisor		
Total Hours		**12**

Program Completion

'C' or better in the required and elective courses.

Advising Resources

Graduate students should consult the graduate advisor corresponding with the appropriate program.

COMPUTER SCIENCE AND ENGINEERING

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/)

ELECTRICAL ENGINEERING

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.

ELECTRICAL ENGINEERING

Location:

NH 501

Email:

ee_ug_advising@uta.edu

Phone:

817-272-2671

Web:

Schedule Advising (https://outlook.office365.com/owa/calendar/EEAdvising@bookings.uta.edu/bookings/)

INDUSTRIAL, MANUFACTURING AND SYSTEMS ENGINEERING

Location:

325 Woolf Hall

Email:

IEUGAdvising@uta.edu

Phone:

817-272-3092

Web:

Undergraduate Advising Information (https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/industrial/students/undergrad-advising/)

MECHANICAL AND AEROSPACE ENGINEERING

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:

204 Woolf Hall

Email:

maeundergrad@uta.edu

Phone:

817-272-2561

Web:

Additional Advising Information (https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/mechanical-aerospace/students/ugadvising/)