Post-Baccalaureate Certificate in Unmanned Vehicle Systems Certificate (Electrical Engineering)

About This Program

The Certificate in Unmanned Vehicle Systems (UVS), offered through the Department of Electrical Engineering (EE), 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 common aspects of UVS such as sensors, actuators, communications, and more importantly, decision-making capabilities (autonomy), while also covering development of domain-specific mobile platforms such as airplane and rotorcraft. 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 the BSEE 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.
3. Upon completion, the students will be able to select appropriate sensing, and control algorithms and deploy them on a mobility platform.

Admissions Criteria

To be considered for admission students must demonstrate the following.

- A bachelor#s degree in an engineering discipline with a minimum GPA of 3.0 or a current enrollment in an engineering master#s program at UTA with a minimum GPA of 3.0. Those who desire to complete the certificate program without enrolling in a graduate degree program must be admitted to UTA as a non#degree seeking student.
- An essay detailing the applicant's background and skills as pertaining to UVS, his/her interest in a specific domain and his/her expected benefit from completing this program.

Curriculum

UVS Foundations		
EE 5307	LINEAR SYSTEMS ENGINEERING	3
EE 6321	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	3
EE 6322	UNMANNED VEHICLE SYSTEM DEVELOPMENT	3
EE Specialization		
Select 2 from the following:		6
EE 5321	OPTIMAL CONTROL	
EE 5322	INTELLIGENT CONTROL SYSTEMS	
EE 5325	ROBOTICS	
EE 5327	SYSTEM IDENTIFICATION AND ESTIMATION	
AE 5301	ADVANCED TOPICS IN AEROSPACE ENGINEERING	
CSE 5369	SPECIAL TOPICS IN INTELLIGENT SYSTEMS	
EE 5323	NONLINEAR SYSTEMS	
Total Hours		**15**

Program Completion

All courses used to satisfy the certificate requirements must be passed with a grade of B or better.

Advising Resources

EE Advising - General information

ELECTRICAL ENGINEERING

Location:

Master's - NH 531

Ph.D. - NH 545

Email:

ee_grad_advising@uta.edu

Phone:

Master's - 817-272-3423

Ph.D. - 817-272-3472

Web:

Master's - Schedule graduate advising (https://outlook.office365.com/owa/calendar/EEGradAdv@bookings.uta.edu/bookings/s/W_X-t8ySDEaqCfz09loAMg2/)

Ph.D. - Schedule graduate advising (https://outlook.office365.com/owa/calendar/EEGradAdv@bookings.uta.edu/bookings/s/ja39PnPrvEC3KPK1JroI9A2/)