

Post-Baccalaureate Certificate in Unmanned Vehicle Systems

About This Program

The Certificate in Unmanned Vehicle Systems (UVS) will educate 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. 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 5383	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS
EE 6321	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS
IE 5378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS
AE 5378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS
ME 5378	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 5384	UNMANNED VEHICLE SYSTEM DEVELOPMENT
EE 6322	UNMANNED VEHICLE SYSTEM DEVELOPMENT
IE 5379	UNMANNED VEHICLE SYSTEM DEVELOPMENT
AE 5379	UNMANNED VEHICLE SYSTEM DEVELOPMENT
ME 5379	UNMANNED VEHICLE SYSTEM DEVELOPMENT

Electives (6 hours) 6

Select 2 courses from one (1) of the following groups:

CSE group

CSE 5342	EMBEDDED SYSTEMS II
CSE 5360	ARTIFICIAL INTELLIGENCE I
CSE 5364	ROBOTICS

EE group

EE 5314	EMBEDDED MICROCONTROLLER SYSTEMS
EE 5325	ROBOTICS

IE group

IE 5330	AUTOMATION AND ADVANCED MANUFACTURING
IE 5351	INTRODUCTION TO SYSTEMS ENGINEERING

AE group

AE 5337	INTRODUCTION TO ROBOTICS
AE 5341	CONTROL SYSTEM COMPONENTS

ME group

ME 5335	OPTIMAL CONTROL OF DYNAMIC SYS
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ME 5337

INTRODUCTION TO ROBOTICS

or any graduate-level engineering or science course 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

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/>)

ELECTRICAL ENGINEERING

EE Advising - General information**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/>)

INDUSTRIAL, MANUFACTURING AND SYSTEMS ENGINEERING

New M.S. Students will attend a departmental orientation and receive advising for first-semester courses. Fast-Track M.S. Students must talk to an M.S. program advisor when enrolling at the beginning of each semester. New Ph.D. students will receive email communications from the Ph.D. program advisor on course requirements, course waivers, diagnostic exam, and other policies as appropriate. Students are welcome to contact program advisors via email with any questions.

Location:

420 Woolf Hall

Email:

imseinfo@uta.edu

Phone:

817-272-3092

Web:

Contact a graduate advisor (<https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/industrial/students/grad-advising/advisor-contact/>)

MECHANICAL AND AEROSPACE ENGINEERING

Advising can be conducted in person or remotely via Teams. Please email your advisor to schedule an appointment. The advising form can be downloaded from the MAE Grad Advising Canvas page. First consult with your advisor if you are planning a Leave of Absence, Grade Forgiveness, or Change of Program.

Location:

306 Woolf Hall

Email:

MAEGradAdvising@uta.edu

Phone:

817-272-2500

Web:

Graduate Advising Webpage (<https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/mechanical-aerospace/students/gradadvising/>)