Post-Baccalaureate Certificate in Unmanned Vehicle Systems (IMSE)

About This Program

The Post-Baccalaureate Certificate in Unmanned Vehicle Systems (Industrial, Manufacturing, and Systems Engineering) focuses on educating graduate students in the skills required to design and develop Unmanned Vehicle Systems (UVS), which will include the development and operation of Unmanned Aerial Systems, Unmanned Ground Systems, and unmanned maritime systems. The program aims to provide the UVS industry with a trained and knowledgeable workforce while also teaching the participants and providing the skills required to advance their careers.

Competencies

1. Upon completion, students will understand the components, classifications, and applications of unmanned systems (aerial, ground, surface, underwater).
2. Upon completion, students will be able to describe the basic principles of flight, navigation, and control systems.
3. Upon completion, students will be able to safely operate unmanned vehicles in simulated and real environments.
4. Upon completion, students will understand and apply relevant laws and regulations (e.g., FAA Part 107 for drones in the U.S.).
5. Upon completion, students will understand the use of GPS, IMUs, and autopilot systems in navigation and control.\\n
6. Upon completion, students will be able to set up and maintain communication links between unmanned vehicles and operators.

Admissions Criteria

UNCONDITIONAL ADMISSION

Applicants meeting the following criteria may be admitted without conditions.

- A GPA of at least 3.0 in the last 60 hours of undergraduate coursework.
- A GPA of at least 3.0 in all prior graduate work.
- A minimum score of 155 on the GRE Quantitative section and 146 on the GRE Verbal section.
- A BS or MS in Engineering or Science.

Remedial course work may be required if an applicant does not have an engineering or science background.

GRE WAIVER

Applicants may request a GRE Waiver (https://common.forms.uta.edu/view.php?id=71616.) if they meet all other admission criteria, they have graduated from an ABET accredited institution, and have a minimal of two years of relevant work experience post-degree.

Curriculum

Foundations		
IE 5378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	3
IE 5379	UNMANNED VEHICLE SYSTEM DEVELOPMENT	3
Specialization		
Select 3 industrial engineering courses approved by certificate program advisor.		9
Total Hours		**15**

Program Completion

CONTINUATION

In order to continue in the program toward graduation, each graduate student must:

- Maintain at least a 3.0 overall GPA in all coursework taken as a graduate student and in their program, and
- Demonstrate suitability for professional practice.

If questions are raised by graduate faculty regarding either of the above, the student will be notified and will be provided the opportunity to respond to the Committee on Graduate Studies in the Department. The Committee on Graduate Studies will review the student's performance and make a recommendation concerning the student's eligibility to continue in the program. Appeal of a decision on continuation may be made through normal procedures outlined in the section of this catalog entitled "Grievances Other than Grades."

Advising Resources

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/)