

Certificate in Automotive Engineering

About This Program

The University of Texas at Arlington is pleased to offer a Certificate in Automotive Engineering through the Arnold E. Petsche Center for Automotive Engineering. This certificate confirms the student's commitment to automotive engineering and the learning experience gained from being a contributing member of a student design competition team. The Certificate in Automotive Engineering will be awarded concurrently with an undergraduate degree. The completed certificate program of study will be forwarded to the Office of Admissions, Records and Registration for verification and notation on the student's transcript. A formal certificate will be prepared for the student by the university.

Competencies

1. Upon completion, a student will be able to describe the various systems on an automobile.
2. Upon completion, a student will be able to work in a team environment for a common goal.
3. Upon completion, a student will be able to design, analyze, and fabricate parts.

Admissions Criteria

The certificate is open to all degree-seeking students.

Curriculum

Foundations

Select 6 hours from the following:		6
EE 2341	DIGITAL CIRCUITS AND SYSTEMS	
EE 3346	CIRCUIT ANALYSIS II (This course is new for fall 2021)	
MAE 3315	AEROSPACE STRUCTURAL STATICS	
MAE 3319	DYNAMIC SYSTEMS MODELING AND SIMULATION	
MAE 4314	MECHANICAL VIBRATIONS	
MAE 4342	MECHANICAL DESIGN II	

Specialization

Select 9 hours from the following:		9
MAE 4357	AUTOMOTIVE ENGINEERING	
MAE 4358	RACECAR ENGINEERING	
MAE 4307	FINITE ELEMENT METHODS	
MAE 4312	CONTROL SYSTEMS COMPONENTS	
MAE 4315	INTRODUCTION TO COMPOSITES	
MAE 4329	ADDITIVE MANUFACTURING	
MAE 4331	DESIGN FOR MANUFACTURING	
MAE 4378	INTRODUCTION TO UNMANNED VEHICLE SYSTEMS	

Non-credit Practicum

Select one from following: ¹		
MAE 2010	AUTOMOTIVE ENGINEERING PRACTICUM I	
MAE 4010	AUTOMOTIVE ENGINEERING PRACTICUM II	

Total Hours	15
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¹ Students must gain approval to enroll from the faculty of the Arnold E. Petsche Center for Automotive Engineering.

Program Completion

In addition to required coursework, the certificate requires one semester of practical training experience that is documented by enrollment in either MAE 2010 or MAE 4010. These are automotive engineering practicum courses that have no academic credit and do not require a tuition fee. Students must gain approval to enroll in these courses from the faculty of the Arnold E. Petsche Center for Automotive Engineering.

The certificate requires that the student be a member of an automotive design competition team, such as Formula SAE, as determined by the director of the Arnold E. Petsche Center for Automotive Engineering.

All courses must be passed with a grade of C or better to apply to the Undergraduate Certificate in Automotive Engineering.

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:

204 Woolf Hall

Email:

maeundergrad@uta.edu

Phone:

817-272-2561

Web:

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