Robotics Minor

The transcript-recognized undergraduate academic Robotics Minor must be completed in conjunction with an undergraduate degree at The University of Texas at Austin in one of the following majors:

- Aerospace Engineering
- Electrical and Computer Engineering
- Computational Engineering
- Mechanical Engineering
- Computer Science

The minor is administered by Texas Robotics as a collaboration between the Cockrell School of Engineering and the College of Natural Sciences. Details about the minor in robotics are available at https://robotics.utexas.edu/.

Admissions

To be considered for admissions into the Robotics Minor, students must meet the following requirements:

- The minor must be completed in conjunction with an undergraduate degree in one of the following supported majors of Computer Science, Aerospace Engineering, Electrical and Computer Engineering, Computational Engineering, or Mechanical Engineering.
- Students who have completed 24 hours or more in residence will be encouraged to apply online at the earliest possible date. Applications open every spring semester.

Total Hours Required: 15

Requirements

Requirements are listed in the table below. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy General Education requirements, including Core Curriculum. Students should also review the University's Undergraduate Minor and Certificate Requirements and Policies.

Code	Title	Hours
RBT 350	Gateway to Robotics	3
Content Area Courses		
Select one course from at least four different content areas:		12
Hardware Courses:		
M E 348E	Advanced Mechatronics I	
M E 348F	Advanced Mechatronics II	
M E 350R	Robot Mechanism Design	
Programming Courses:		
M E 369P	Application Programming for Engineers	
C S 330F	F1/10 Autonomous Driving	
ECE 445L	Embedded Systems Design Laboratory	
ECE 445M	Embedded and Real-Time Systems Laboratory	
ASE 479W	Aerial Robotics	
Modeling and Control Courses:		
M E 364L	Automatic Control System Design	
ASE 370C	Feedback Control Systems	
ECE 362K	Introduction to Automatic Control	
ASE 330M	Linear System Analysis	
M E 354M	Biomechanics of Human Movement	
M E 372J	Robotics and Automation	
C S 330F	F1/10 Autonomous Driving	
Sensing, Perception, and Planning Courses:		
C S 330F	F1/10 Autonomous Driving	
M E 372J	Robotics and Automation	
ASE 479W	Aerial Robotics	
ECE 445L	Embedded Systems Design Laboratory	
ECE 445M	Embedded and Real-Time Systems Laboratory	
ECE 374N	Neural Engineering	
C S 376	Computer Vision	
ECE 371P	Introduction to Computer Vision	
Machine Learning Courses:		
C S 342	Neural Networks	
C S 343	Artificial Intelligence	
C S 363M	Principles of Machine Learning I	
COE 379L.1	Introduction to Machine Learning and Data Sciences	
ECE 460J	Data Science Laboratory	
ECE 361E	Machine Learning and Data Analytics for Edge Artificial Intelligence	
ECE 374N	Neural Engineering	
ECE 461P	Data Science Principles	
Total Hours		**15**

Additional Requirements and Policy

- All students will be required to take a three-credit-hour, gateway course (RBT 350) that will prepare students to take robotics minor courses in areas outside of their declared major.
- In addition to the gateway course, students must take 4 courses; each course must be from a different content area. There are five content areas: hardware; programming; modeling and control; sensing, perception and planning; and machine learning. See the course list for each content area above.
- All classes must be taken on the letter-grade basis. The student must earn a combined grade point average of at least 2.00 in these courses.