

Automation and Robotic Systems Concentration

Woodruff School of Mechanical Engineering, Georgia Institute of Technology

Introduction

- Concentrations are optional, not required.
- Concentrations are 15 hours and the classes satisfy the Design Elective, the ME Elective and 9 hours of free electives.
- Concentrations are different than minors because they allow students to specialize in a particular area within ME.
- Classes used for a concentration may not also be used towards a minor, an additional concentration, or a second degree.
- This concentration is only available to ME majors who are following the 2012-2013 Catalog Year or later.

Concentration Requirements - To satisfy a concentration, students must do each of the following:

- If necessary, change your curriculum to the latest Catalog Year. This is done by [filling out a change of major form](#).
- Declare your concentration in OSCAR. http://www.degreeworks.gatech.edu/images/training/concentration_mgt.pdf
- Complete all of the required classes and the correct number of elective classes in the table listed below. The classes required for the concentration will satisfy the Design Elective, an ME Elective and 9 hours free electives.

Course Number and Name	Credit Hours	Lab ³	Pre-Requisites and Co-Requisites*	ME Elective	Projected Offering (Fall, Spring or Summer) ¹		
					Fall	Spr	Sum
Required Classes							
ME 3180 Machine Design	3		ME 2110, COE 3001	Design	X	X	X
ME 4452 Control of Dynamic Systems ⁴	3		ME 3017	X	X ²	X ²	
Elective Classes (Choose 3)							
ME 4013 Hybrid Vehicle Powertrains	3		ECE 3710	X	X ²		
ME 4189 Advanced Structural Vibrations	3		ME 2202, MATH 2552	X	X	X ²	X ²
ME 4012 Modeling and Control of Motion	3	X	ME 3017	X		X	
ME 4451 Robotics	3	X	ME 3017	X	X		
ME 4405 Fundamentals of Mechatronics ⁵	3	X	ME 3017, ME 3057*	X	X	X ²	
CS 3600 Introduction to Artificial Intelligence	3		CS 1332		X	X	
CS 4641 Machine Learning	3		CS 1331			X ²	

Notes

1. This chart is a projected schedule of class offerings and may change at any time. Students should check OSCAR for exact class offerings during each semester. This table should only be used as a guide.
2. This class is sometimes offered during this semester.
3. This indicates that the course contains a lab component.
4. These classes are not offered on a regular basis. Students need to check OSCAR to see when the classes will be offered.
5. Starting fall 2014, this changed to ME 4405, Fundamentals of Mechatronics. This course was previously taught as ME 4447, Microprocessor Control of Manufacturing Systems. Students can only receive credit for ME 4405 or ME 4447, not both.

Pre-Requisite Information for Non- ME Classes

- **CS 3600 Pre-Req Chain:** CS 1371 -> CS 1331 -> CS 1332 -> CS 3600
- **CS 4641 Pre-Req Chain:** CS 1371 -> CS 1331 -> CS 4641