

CORE COURSES			
Required:	Choose TWO additional core classes from different categories. Foundational Courses may not be double counted as Core Courses.		
MECHANICS	CONTROL	COGNITION	PERCEPTION
ROBOT 5000/ CS 5310/ ECE 5650/ ME EN 5220 (3 cr) Robotics I: Mechanics	ROBOT 5100/ ME EN 5230 (3 cr) Robotics II: Control	* ROBOT 6200/ CS 6370/ ME EN 6225 (3 cr) Motion Planning <i>or</i> CS 4300 (3 cr) AI	CS 4640 / BME 4640 (3 cr) Image Processing <i>or</i> * CS 5320 (3 cr) Computer Vision

PROJECT REQUIREMENT 1 credit minimum
ROBOT 5920 (Independent) Graduate Project with faculty + presentation <i>or</i>
May be fulfilled by: Approved Intensive Project Course *
ROBOT 6500 / ME EN 5240 (4 cr) Advanced Mechatronics ROBOT 6960 (3 cr) Wearable Robotics ROBOT 6200/ CS 6370/ ME EN 6225 (3 cr) Motion Planning CS 5320 (3 cr) Computer Vision ROBOT 6400/ BME 6440/ ECE 6654 (4 cr) Neural Engineering and NeuroRobotics

* Students choosing to take project-intensive courses to double count as CORE and PROJECT *may* need to take additional approved electives or the Robotics Seminar to reach the 16 credit hour minimum.

FOUNDATIONAL COURSES

Complete **ONE SET of two courses** (students must meet course prerequisites in order to enroll)

Set 1: MECHANICAL ENGINEERING

ME EN 3220 (3 cr)
 Dynamic Systems & Control
ME EN 3230 (4 cr)
 Mechatronics

Set 2: ELECTRICAL & COMPUTER ENGINEERING

ECE 3610 (3 cr)
 Fundamentals of Robotics & Cyberphysical Systems
ECE 5615 (3 cr)
 Classical Control Systems

or Set 3: COMPUTER SCIENCE

CS 4300 (3 cr)
 Artificial Intelligence
CS 4640 (3 cr)
 Image Processing Basics