## **Robotics Undergraduate Minor Requirements**

Minimum total of 16 credits

2 Foundational Courses, 3 Core Courses, 1 Credit of Undergraduate Project

Course Number	Course Title	Cross-listings	Offered
FOUNDATIONAL COURSE REQUIREMENT (Co	omplete one set of two courses):		
ME EN 3220	Dynamic Systems and Control		
ME EN 3230	Mechatronics		
ECE 3610	Fundamentals of Robotics & Cyberphysical Systems		+
ECE 5615	Classical Control Systems		
CS 4300	Artificial Intelligence		
CS 4640	Image Processing Basics		
CORE COURSE REQUIREMENT:	Course Title	Cross-listings	Offered
Robot Mechanics Core Area (Required):			
ROBOT 5000	Robotics I: Mechanics (formerly Intro to Robotics)	CS 5310, ECE 5650, ME EN 5220	Fall
CHOOSE 2 CORE COURSES FROM 2 DIFFERENT AR Course Title		Cross-listings	Offered
Robot Control Core Area:			
ROBOT 5100	Robotics II: Control (formerly Intro to Robot Control)	ME EN 5230	Spring
Cognition Core Area:			
ROBOT 6200	Motion Planning	CS 6370, ME EN 6225	Spring
CS 4300 (if not used as Foundational Course)	Artificial Intelligence		Fall
Perception Core Area:			
CS 4640	Image Processing	BME 4640	Fall
CS 5320	Computer Vision		Fall
PROJECT REQUIREMENT (1 credit)	Course Title	Cross-listings	Offered
ROBOT 5920	Graduate Project		