ROBOTICS
THE UNIVERSITY OF UTAH

MS Degree Requirements

Minimum 30 credits

CORE COURSES
12 credits required

MECHANICS	CONTROL	COGNITION	PERCEPTION
ROBOT 6000 Robotics I: Mechanics	**ROBOT 6100** Robotics II: Control	*** ROBOT 6200** Motion Planning *or* **CS 6300** Artificial Intelligence	**CS 6640** Image Processing *or* *** CS 6320** Computer Vision

ALLIED COURSES
3+ Engineering credits (as needed to reach the 30-credit hour minimum requirement)

ELECTIVE COURSES
6 credits required - Select 2 classes from two different categories:

MECHANICS	CONTROL	DESIGN
ROBOT 7000 Manipulation, Mobility **ROBOT 7010** System Identification for Robotics	**ME EN 6200/ ECE 6615** Classical Control Systems **ECE 6670** Control of Electric Motors **ME EN 6210/ ECE 6652 / CH EN 6203** State Space Control **ME EN 7200** Nonlinear Control **ME EN 7210** Optimal Control **ECE 6570** Adaptive Control	*** ROBOT 6500** Advanced Mechatronics *** ROBOT 6960** Wearable Robotics **ECE 6780/ CS 6780** Embedded System Design **ECE 6960** Robotic Millisystems **ROBOT Special Topics** Medical Robotics **ROBOT Special Topics** Adv Design in Robotics

COGNITION
CS 6350 Machine Learning **ROBOT Special Topics** Robot Learning **ROBOT Special Topics** Advanced AI

HUMAN-ROBOT INTERACTION	PERCEPTION
CS 6360 Virtual Reality **ROBOT 7400** Haptics for VR,Tele-operation, and Physical Human-Robot Interaction *** ROBOT 6400** Neural Engineering and NeuroRobotics **ROBOT Special Topics** Intro to Physical Human-Robot Interaction	**CS 7640** Adv. Image Processing **CS 6353** Deep Learning for Image Analysis **ECE 6530** Digital Signal Processing **ROBOT Special Topics** Algorithmic Foundations of Robotics

SEMINARS
2-3 credits required

ME EN 6890 *or* **CS 7930** *or* **ECE 6900** (Thesis option only)	**ROBOT 6800** Robotics Seminar (Enroll in 2 semesters for 1 credit each semester)

THESIS or PROJECT
6 credits required

ROBOT 6970 Master's Thesis
or
ROBOT 6920 Graduate Project
or
ROBOT 6920 + ***** Approved coursework with intensive project

10/23/25