

# ROBOTICS ENGINEERING GRADUATE CERTIFICATE

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This certificate will produce students that have a deep understanding of the Robotics stack from the lower level motors and controllers through PLC controllers and into higher level cognitive processes including using modern AI techniques. It is designed to encourage research in robotics by MS and PhD graduate students.

All required coursework must be completed with a grade of B or better (O-10-b (<https://catalog.uidaho.edu/general-requirements-academic-procedures/o-miscellaneous/>)).

Code	Title	Hours
CS 553	Robotic Systems Engineering I	3
CS 554	Robotic Systems Engineering II	3
Any two of the following:		6
CS 543	Embedded Systems	
CS 544	Supervisory Control and Critical Infrastructure Systems	
CS 552	Real Time Operating Systems	
CS 555	Machine Vision	
CS 566	PLC Programming for Automation	
CS 570	Artificial Intelligence	
CS 572	Evolutionary Computation	
CS 574	Deep Learning	
CS 575	Machine Learning	
CS 577	Python for Machine Learning	
ME 554	Assistive Technologies for Physical Impairment	
ME 564	Robotics: Kinematics, Dynamics, and Control	
<b>Total Hours</b>		<b>12</b>

**Courses to total 12 credits for this certificate**