

MET 4860L - Robotics Technology Laboratory

Fall 2026 Syllabus, Section 01, CRN 43593,

Credit hours: 1

Instructor

Brian Vuksanovich

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Public Instructor Information

Instructor Title: Professor

Instructor Professional Qualifications: Ph.D. Materials Science and Engineering, Youngstown State University, 2022

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Course Description

4860L. Robotics Technology Laboratory. Practice in the programming and application of industrial robots and associated equipment. Construction of simulated robotic workcells using actual industrial robots, programmable controllers, sensors, and grippers. Two hours lab per week. Coreq.: MET 4860. 1 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Fanuc HandlingTool Manual	Fanuc	None

DO NOT BUY - available for use in lab

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Chapter 1, 2	Overview, Robot Basics, , Safety, Pre-Test	
8/31	Chapters 3, 4, 5	Robot System, Anatomy, iPendant	Due 9/4 at 11pm: Pre-Test (20 minute time limit). Complete by 11:00 pm EST, 9/4/2026 Due 9/4 at 11:59pm: 1 Robot Safety & Basic Operation Questions - Due 9/4/2026
9/7	Chapters 6, 7	Files, Coordinate Systems and Jogging	
9/14	Chapters 7, 8, 9	Jogging, Setup, Alarms	
9/21	Chapter 10	Frames – Tool, User, Jog	
9/28	Chapter 10	Frames – Tool, User, Jog	
10/5	Chapter 11	Creating Programs	
10/12	Chapter 12	Motion Instructions	
10/19	Chapter 12	Motion Instructions	
10/26	Chapter 13	Editing	
11/2	Chapter 14	Input / Output (I/O)	
11/9	Chapter 15	Branching	
11/16	Chapter 15	Branching	
11/23	Chapter 16	Macros	

11/30	Chapter 17	Offsets, Misc. Instructions	Due 11/30 at 3pm: Programming Project - Fall 2026 (Due Monday 11/30/2026) Certification Test - Paper (Monday 11/30/2026)
12/7	Chapter 18	Class Review/Evaluation	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.