EET 2410 Mechatronics I Fall 2020

When and where	Lecture NE 2390 2:30-3:50 T,R	Lab 002- NE 2390 T 3:55-5:25 pm NE 2390 and NE 2350 Lab 003- NE 2390 R 3:55-5:25 pm NE 2390 and NE 2350
Instructor	Prof. Wm Ted Evans, PhD, PE (Ohio)-Office: NE 1607, Phone 419-530-3349, cell 419-343-3681 Email: william.evans@utoledo.edu, web: www.eng.utoledo.edu/~wevans	
Office Hours	9:30-12:00 M, W	
Prerequisite	**Prerequisites:** Undergraduate level EET 2210 Minimum Grade of D-	
Textbook	Provided free on above website under Hybrid Text (ch. 1-13, 15, 16)	
Useful References	Other texts from website	
Grading	**Quizzes 10 %, Projects 40 %** **Midterm exam 25 %, Final Exam 25 %** **(A >= 90, B >= 80, C > = 70, D > = 60)**	
Class rules and regulations	1. No eating, drinking, or smoking in classrooms. 2. There are no make-up exams for this course. If you have a problem or conflict and cannot attend an exam, let me know beforehand and we will try to work something out. No credit will be given for a missed exam that we haven't made arrangements about beforehand unless you have a ***really excusable*** emergency. Cell phone use will not be allowed. If you do not have a calculator, buy one and bring it to class. Cheating is not allowed and will be punished by rules of U of Toledo Student Handbook. Read the restart text at: https://www.utoledo.edu/rocket-restart/signage/pdf/rocket-restart-manual.pdf	
Catalog descriptions	A study of programmable controllers emphasizing program development, logic development and troubleshooting. Emphasis on relays, timers, counters, integer math and scan-dependent programming. Factory floor control concepts are stressed.	
Topics and reading assignments (subject to change, any changes will be notified in the class beforehand)	1. Introduction to Relay Logic including the history of PLCs 2. Introduction to PLC programming on the PC 3. Allen-Bradley Instruction Set – Memory Circuit Construction 4. Siemens Instruction Set – Memory Circuit Construction 5. Hardware considerations 6. PLC Addressing 7. Timer and Counter applications 8. Math and Numeric Applications including number systems 9. Control Panel Planning, Safety, and Sensor Selection 10. State Diagram and sequential program design 11. Special Instructions, batch programming and use of Specifications 12. Introduction to HMI Concepts 13. Introduce data transfer concepts in PLC networks	
Class dates (Exam dates are subject to change.)	Fall Session 2020 – 15 weeks starting 8-17-20 and ending 12-4-20	
	Quizzes may occur any day at the end of the class period. If a student chooses to take the course remotely, then they are responsible for chapter reviews counting 1 point per review (Ch. 1-13). These substitute for the quiz grade. Students wanting face-to-face may add to their quiz grade by submitting chapter reviews again counting 1 point per review. Labs taken remotely require the student to review the video of the lab and write a report of the lab as if they were in the lab. If a student chooses remote, then he/she will be required to take test 1 at the testing center unless they are remote to the Toledo area.	

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Students enrolled in Course:

	Tuesday Lecture
1	Alabkariey, Jory
2	Alrasheedi, Abdulelah S.
3	Auten, Jared
4	Bolin, Dominic E.
5	Bolton, Blake E.
6	Brown, Rebecca E.
7	Byrd, De'aundre M.
8	Corte, Donald
9	Rottem, Ido
10	Cubberly, Nicholas J.
11	DeKoekkoek, Jonathan K.
12	Deneweth, Tyler E.
13	Douglas, Joseph M.
14	Groat, Matthew
15	Levengood, Riley N.
16	

	Tursday Lecture
17	Henry, Jacob
18	King, Trevor C.
19	Landel, Josh D.
20	Loggins, Kalli A.
21	Mcgrew, Jacob H.
22	Monnin, Trenton L.
23	Schulz, Isaac T.
24	Sheets, Cody A.
25	Spradlin, Reece P.
26	Volkmer, Luke B.
27	Westhoven, Tyler T.
28	
29	
30	
31	
32	

Remote
Cox, Morgan
Magar, Ashwin K.
Hayes, Ebonique R.
Alfaihani, Abdullah
Wilkinson, Gavin H.
McCutchan, Carter M.
Jeffries, Kyle D.
Rahman, Ghazaal

Type	Chapter	Due Date
Review Lecture	Chapter 1	Aug. 20, 2020
Review Lecture	Chapter 2	Aug. 25, 2020
Lab 2.1	Chapter 2 – pg 31-35	Due Sept. 3, 2020
Review Lecture	Chapter 3	Aug. 27, 2020
Review Lecture	Chapter 4	Sept. 1, 2020
Lab 4.1	Chapter 4 – Pg. 34-37	Due Sept 10, 2020
Review Lecture	Chapter 5	Sept. 3, 2020
Lab 5.1	Chapter 5	Due Sept 10, 2020
Review Lecture	Chapter 6	Sept. 8, 2020
Review Lecture	Chapter 6	Sept. 10, 2020
Review Lecture	Chapter 7	Sept. 15, 2020
Lab 7.1		
Lab 7.2		
Review Lecture	HMI - End of chapter	Sept. 17, 2020
Review Lecture	Chapter 8	Sept. 22, 2020
Lab 8.1		
Review Lecture	Chapter 9	Sept. 24, 2020
Test 1	Ch. 1-8	Sept. 29, 2020
Test 1	Ch. 1-8	Oct. 1, 2020
Review Lecture	Chapter 10	Oct. 6, 2020
Lab 10.		
Review Lecture	Chapter 11	Oct. 8, 2020
Review Lecture	Chapter 11	Oct. 13, 2020
Lab 11.1		
Review Lecture	Chapter 12	Oct. 15, 2020
Review Lecture	Chapter 13	Oct. 20, 2020
Review Lecture	Chapter 13	Oct. 22, 2020
Lab 13.		
Lab 13.		
Review Lecture	Chapter 14	Oct. 27, 2020
Review Lecture	Chapter 14	Oct. 29, 2020
Lab 14.		
Review Lecture	Chapter 15	Nov. 3, 2020
Review Lecture	Chapter 15	Nov. 5, 2020
Lab 15.		
Lab 15.		
Review Lecture	Chapter 16	Nov. 10, 2020
Review Lecture	Chapter 16	Nov. 12, 2020
Lab 16.		
Lab 16.		
Review	All	Nov. 17, 2020
Review	All	Nov. 19, 2020
Review	All	Nov. 24, 2020
Final		
Any 10 labs = 40%		