

COURSE OUTCOME MATRIX

COURSE SYLLABUS

PART 2 of 3

Course Number and Title	MX 110 Introduction to Mechatronics
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Credit Hours	2
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Course Description	Introduction to Mechatronics is an overview course that introduces students to the field of Mechatronics. Students will rotate through modules that will give them insight into the skills, concepts, equipment, and challenges they will encounter as a mechatronics technician. Modules will include basic calculations, basic tool use, laboratory safety, precision measurement, systems analysis, mechanical power, fluid power, robotics, and programmable logic controllers. Included will be basic professional preparation topics such as resume writing, job readiness, and job interviewing and portfolio development.
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Prerequisite(s) and/or Corequisite(s)	N/A
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Required Textbooks/References/Course Materials:

Industrial Mechanics - with codes	4th	Albert W. Kemp	American Technical Publishers	0826937128
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	General Education Outcomes
1	Utilize written and verbal language to discuss and comprehend information, incorporating a variety of technologies, such as text, data, and images (written language, verbal language, and information technology).
2	Identify and interpret relevant information in order to formulate an opinion or conclusion (critical thinking).
3	Demonstrate and communicate computational methods and mathematical reasoning in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate) (quantitative literacy and fluency).
4	Communicate in appropriate ways with those who are culturally diverse (intercultural competence).

	Program/Department Outcomes
1	Prepare students to become safe and competent electrical technicians
2	Provide opportunities to display critical thinking skills
3	Demonstrate responsible professional conduct and behavior.
4	Effectively communicate.
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	Course Outcomes (CO)	Bloom's Domain for CO (C, A, P), Category, and Level	Program/ Department Outcome(s)	Written Language	Verbal Language	Information Technology	Critical Thinking	Quantitative Literacy and Fluency	Intercultural Competence
1	Comprehend basic tool use.	C-Understanding (2)	1, 2,	1	1	1	1	1	0
2	Comprehend various symbols and drawing methods to understand mechanical, electrical, welding and fluid power drawings.	C-Understanding (2)	2, 4	1	1	1	1	2	0
3	Compute basic calculations relative to electrical, mechanical, and fluid power systems.	C-Appling (3)	1, 2, 4	1	1	1	1	2	0
4	Comprehend the basic principles of operation of Programmable Logic Controllers.	C-Understanding (2)	1, 2, 3, 4	1	1	1	1	2	0
5	Comprehend the skill sets needed for a successful career in mechatronics.	C-Understanding (2)	2, 3	1	1	1	1	1	0
6									
7									
8									
9									
10									

Bloom's Domain Legend

C = Cognitive
A = Affective
P = Psychomotor

General Education Outcome Legend

2 = Included and Measurable
1 = Introduced and/or Minimally Addressed and Not Measurable
0 = Not included

Approved: May 2021
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