

## COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title	EG 214 Electronic Control Systems
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Credit Hours	4
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Course Description	Introduction to the principles of operation of motors, generators, transformers, and motor controls.
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Prerequisite(s) and/or Corequisite(s)	EG 107 or higher MT 124 or higher
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Required Textbooks/References/Course Materials:

Industrial Motor Control	7th	Herman	Delmar Publishers	1133691803
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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	Describe the purpose and general principles of motors, starters, the various components of motor starters, control equipment, control transformers, various sensor switches and relays	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
2	Compare and Contrast various symbols, Interpret and develop schematic diagrams, wiring diagrams, ladder logic	C-Analyzing (4)	1, 2, 4	1	1	1	2	1	0
3	Compare and contrast the use of various motor controls for jogging, inching, reverse, forward, manual and automatic operation, and starting motors in a predetermined sequence	C-Analyzing (4)	1, 2, 4	1	1	1	2	1	0
4	Describe the application and characteristics of DC motors	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
5	Compare and contrast the operation of and wiring methods of three-phase motors	C-Analyzing (4)	1, 2, 4	1	1	1	2	1	0
6	Compute starting current for wye and delta connected motors, conductor size for motor installations, short circuit protection, starter size	C-Appling (3)	1, 2, 4	1	1	1	1	2	0
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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  
Reviewed: November 11, 2021