

COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title	EG 230 Residential Wiring
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Credit Hours	4
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Course Description	This course provides instruction in the knowledge and skills necessary to perform wiring functions in a residential setting. The National Electrical Code will be used to specify requirements to install wiring devices such as control panels, breaker systems, and current devices. Upon completion of the course, students should be able to determine the proper equipment associated with electrical installations in the residential field and to install it.
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Prerequisite(s) and/or Corequisite(s)	MT 124 or 124A
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Required Textbooks/References/Course Materials:

Electrical Wiring Residential - With Plans and MindTap	19th	Phil Simmons, Ray C. Mullin	Cengage Learning	1337577340
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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 the organization of the NEC and the updating process; basic safety rules for working electrical systems	C-Understanding (2)	1, 2, 4	1	1	1	2	1	0
2	Comprehend project requirements, building plans, specifications, and electrical installation requirements	C-Understanding (2)	1, 2, 4	1	1	1	2	1	0
3	Compute loads, number of branch circuit requirements	C-Applying (3)	1, 2, 4	1	1	1	1	2	0
4	Describe switch, receptacle raceway, cable requirements, branch circuits, feeder, conductor size, overcurrent protective device ratings	C-Evaluating (5)	1, 2, 4	1	1	1	1	1	0
5	Compute feeder loading, voltage drop, short circuit fault currents	C-Applying (3)	1, 2, 4	1	1	1	1	2	0
6	Explain installation of panel boards, service equipment, grounding	C-Creating (6)	1, 2, 4	1	1	1	1	1	0
7	Identify transformer connection diagrams, types, classes, and ratings of fuses, and circuit breakers	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
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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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