

COURSE OUTCOME MATRIX

COURSE SYLLABUS

PART 2 of 3

Course Number and Title	EG 297 National Electric Code
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Credit Hours	1
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Course Description	This course covers the National Electric Code. Articles of coverage include: definitions, general requirements, branch circuits, feeder, and service calculations, overcurrent protection, grounding, conductors for general wiring, flexible cords, motors, motor controllers, motor circuits, hazardous locations, electric welders, interpretation of the tables, transformers, over 600 volts general and other articles necessary for the Journeyman's licensure exam.
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Prerequisite(s) and/or Corequisite(s)	N/A
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Required Textbooks/References/Course Materials:

Illustrated Guide to the National Electric Code	7th	Charles R. Miller	Cengage Learning	1337101974
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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; mandatory rules, permissive rules, and information; listed and approved equipment; listings used in approving installations; terms that are specific to the NEC;	C-Understanding (2)	1, 2, 3, 4	1	1	1	2	1	0
2	Explain working space requirements; electrical equipment requirements for branch circuits, feeders, and services; requirements for service equipment and conductors; requirements for overcurrent devices; junction and pull box sizing.	C-Evaluating (5)	1, 2, 3, 4	1	1	1	1	1	0
3	Describe general installation of cables; raceways and conduits; grounded conductors, equipment grounding conductors, bonding jumpers, and grounding electrode conductors; requirements for grounding or bonding.	C-Evaluating (5)	1, 2, 3, 4	1	1	1	1	1	0
4	Describe provisions for one family dwellings, specific provisions; multifamily dwellings.	C-Evaluating (5)	1, 2, 3, 4	1	1	1	1	1	0
5	Describe specific wiring methods; overhead and underground services; clearances; conductor size; disconnecting means and overcurrent devices; grounding; panel boards.	C-Evaluating (5)	1, 2, 3, 4	1	1	1	1	1	0
6	Compute voltage drops for single phase and three phase installations; load calculations; lighting loads; overcurrent protection for motors; for transformers; one family dwellings; multifamily dwellings; commercial buildings.	C-Applying (3)	1, 2, 3, 4						
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
Reviewed: November 11, 2021