COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title EG 103 Electrical Calculations

Credit Hours 3

Course Description	This course introduces the necessary mathematics for electricians including: fractions, percentages, mixed numbers, ratio and proportion, signed numbers, basic trig functions, metric units, basic conversions, complex numbers, octal, binary and hex number systems, solving equations, formula manipulations, exponents, scientific notation and other concepts essential to electrical computation.
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Prerequisite(s)	MT 121 or MT 121E or minimum acceptable test scores for placement in college-level math (quantitative reasoning).
and/or	
Corequisite(s)	

Required Textbooks/References/Course Materials:

Practical Problems in Mathematics for Electricians	9th	Herman	Delman/Cengage	1111313474

	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.
5	

	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	Set up and compute problems of addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimal fractions.	C-Applying (3)	2, 4	1	1	1	1	2	0
2	Set up and compute problems of percentages, interest, discounts, averages, and estimates.	C-Applying (3)	2, 4	1	1	1	1	2	0
3	Set up and compute problems involving powers of 10, roots in metric and scientific notation.	C-Applying (3)	2, 4	1	1	1	1	2	0
4	Set up and compute problems involving length, area, volume and mass measurements, energy and temperature measurements, ratio and proportion.	C-Applying (3)	2, 4	1	1	1	1	2	0
5	Compute problems involving formulas such as Ohms Law and Power formulas.	C-Applying (3)	2, 4	1	1	1	1	2	0
6	Compute problems involving right triangles, trigonometric functions, vectors and numbering systems.	C-Applying (3)	2, 4	1	1	1	1	2	0
7									
8									
9									
	Bloom's Domain Legend C = Cognitive A = Affective Bloom's Domain Legend C = Cognitive A = Affective Bloom's Domain Legend C = Cognitive A = Affective C = Cognitive C = Cognitiv								

P = Psychomotor

0 = Not included

Approved: Reviewed:

May 2021 November 11, 2021