

COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title	EG 181 Analog Electronics I
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Credit Hours	4
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Course Description	This course is designed to provide the student with a review and enhancement of analog electronic circuits that include semi-conductor components, electron physics, diode circuits, power supplies, transistors and transistor circuits, amplifiers, regulation, filters, J.F.E.T.S. Mosfets, SCR and triac circuits, operational amplifiers, oscillators and linear integrated circuits.
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Prerequisite(s) and/or Corequisite(s)	EG 171 Circuit Analysis I
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Required Textbooks/References/Course Materials:

Electronic Principles	8th	Malvino/Bates	McGraw Hill	0073373885
Exper. For Electron Priciples to Accompany Elec. Principles	8th	Malvino/Bates	McGraw-Hill	1-259-20011-6

	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 approximations, formulas, ideal voltage sources, current sources, Thevenin & Norton's Theorems.	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
2	Describe the characteristics of good conductors, and semiconductors, the structure of silicon diodes, diode concepts, data sheet characteristics, diode half-wave and full-wave rectifiers, clippers, and clampers, Zener diodes, Schottky diodes, varistors.	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
3	Compute first, second and third approximations.	C-Applying (3)	1, 2, 4	1	1	1	1	2	0
4	Describe transistor characteristics, the relationship of base, emitter and collector, bipolar junction transistor, various amplifier characteristics,	C-Remembering (1)	1, 2, 4	1	1	1	2	1	0
5	Compute base, emitter, and collector currents, voltages, voltage gain and amplifications	C-Applying (3)	1, 2, 4	1	1	1	1	2	0
6	Describe JFET, SCR, IGBT, UJT, PUT applications and characteristics	C-Remembering (1)	1, 2, 4	1	1	1	2	1	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