

ELECTRICAL POWER ENGINEERING TECHNOLOGY (EPET)

Student Outcomes

These are statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

By the time students' graduate, they should:

- a. Have a working knowledge of the principles and practices of the electrical power industry regarding generation, transmission, distribution, and electrical machines and their controls.
- b. Be able to apply their knowledge of electrical power principles, as well as mathematics and scientific principles, to new applications in electrical power.
- c. Be able to perform, analyze, and apply the results of experiments to electrical power application improvements.
- d. Be able to look at all options in design and development projects and creatively choose the most appropriate option for the current project.
- e. Have the ability to function effectively as a member of a project team.
- f. Be able to identify problems in electrical power systems, analyze the problems, and solve them using all of the required and available resources.
- g. Be able to effectively communicate technical project information in writing or in personal presentation and conversation.
- h. Be engaged in continuously learning the new practices, principles, and techniques of the electrical power industry.
- i. Comport themselves in an ethical, professional, and responsible manner.
- j. Be engaged in learning and appreciating the issues, both global, nationally, and locally that impact their lives and their chosen industry, and be sensitive to the impact of the issues on different constituencies.
- k. Be committed to continuous improvement, quality, and timely action within the electrical power industry and in their personal lives.
- l. Apply circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers to the building, testing, operation, and maintenance of electrical/electronic(s) systems.
- m. Apply physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry.
- n. Analyze, design, and implement control systems, instrumentation systems, communication systems, computer systems, or power systems.
- o. Apply project management techniques to electrical/electronic(s) systems.
- p. Utilize statistics/probability, transform methods, discrete mathematics, or applied differential equations in support of electrical/electronic(s) systems.