Support of Program Outcomes by Technical Courses in the Major
Electrical Engineering Technology
(Smart Grid Option)

Program Outcomes	Required Courses															
	ENT300 Analytical Methods	ENT301 Mechanics 1	ENT302 Mechanics 2	ENT331 Electrical Circuits and Devices I	ENT 341 Electronics	ENT342 Networks	ENT371 Electric Machines	ENT345 Digital Systems	ENT346 Microprocessors	ENT 445 Power Electronics	ENT 461 Control Systems I	ENT 462 Control Systems II	ENT 465 Electrical Design	ENT 471 Power Systems I	ENT 472 Power Systems II	TEC 101 Technical Drawing
a) an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities					X I	X R	X R	X R	X R	X M	X M	X M	X M	X M	X M	
b) an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies	X I	X R	X R			X R	X R	X I	X R	X R	X M	X M	X M	X M	X M	
c) an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes				X I	X I		X R	X I	X R	X M	X M	X M				
d) an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives									X R				X M		X M	

e) an ability to function effectively as a member or leader on a technical team					X I			X R	X M				X M		X M	
f) an ability to identify, analyze, and solve broadly-defined engineering technology problems		X I	X R					X I	X R		X M	X M	X M	X M	X M	
g) an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature								X I	X R		X M	X M	X M	X M	X M	
h) an understanding of the need for and an ability to engage in self-directed continuing professional development									X I				X M	X R	X M	
i) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity													X M	X R	X R	
j) a knowledge of the impact of engineering technology solutions in a societal and global context													X M		X M	
k) a commitment to quality, timeliness, and continuous improvement											X R	X R	X R			
Application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems				X I	X R	X R	X R	X R	X R		X M	X M		X M	X M	
Applications of physics to electrical/electronic(s) circuits in rigorous mathematical environment above the level of algebra and trigonometry	X I					X R		X R			X M	X M		X M	X M	

Ability to analyze, design, and implement control systems, communications systems, microprocessor based systems, and power systems											X M	X M	X M	X M	X M	
Ability to apply project management techniques to electrical/electronic(s) systems											X I	X R	X M		X M	
Ability to utilize statistics/probability, transform methods, and applied differential equations in support of electrical/electronic(s) systems	X I					X R					X M	X M				

Note: I – Introduction, R – Reinforcement, M – Mastery. Color-filled cells indicate that these courses are used for assessment.