



Electrical Technology

Student Learning Outcomes

- 1 Communication- The student will demonstrate the ability to communicate effectively using written and/or oral communication.
- 2 Information Literacy- The student will recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.
- 3 Problem Solving- The student will demonstrate the ability to analyze information and solve problems.
- 4 Workplace Skills - Demonstrates a mastery of workplace skills/soft skills, exhibits initiative, adapts to varied situations

Program Outcomes

- 1 Apply Technical Knowledge and Skills: Graduates will possess the technical knowledge and skills necessary to install, operate, maintain, and repair various electric apparatus and systems. They will demonstrate proficiency in electrical power wiring, DC and AC motors, controls, electrical distribution panels, and low voltage wiring.
- 2 Interpret Electrical Diagrams: Students will be able to read and interpret electrical diagrams, schematics, and blueprints accurately. They will understand symbols, labels, and annotations commonly used in electrical drawings, enabling them to effectively plan and execute electrical installations and repairs.
- 3 Execute Residential and Commercial Wiring: Graduates will demonstrate competence in residential and commercial wiring methods. They will be able to select and install appropriate wiring materials, adhere to safety regulations, and apply the National Electrical Code (NEC) requirements in wiring residential and commercial buildings.
- 4 Comprehend the National Electrical Code: Students will gain a comprehensive understanding of the National Electrical Code (NEC) and its practical application in electrical installations. They will be able to identify and interpret NEC requirements, ensuring compliance with safety standards and industry best practices.
- 5 Implement Motor Control Systems: Graduates will possess the knowledge and skills to install, operate, and troubleshoot motor control systems. They will understand motor control diagrams, wire motor control circuits, and employ appropriate testing and troubleshooting techniques to ensure optimal performance.
- 6 Perform Low Voltage Wiring: Students will learn to install and maintain low voltage wiring systems commonly found in residential, commercial, and industrial settings. They will be able to work with data, voice, and video cabling, security systems, and other low voltage applications.

Fall

Course #	Course Title	Credits	Function
ELE 120	AC/DC Circuits	4	Technical Studies
ELE 110	Print Reading	2	Technical Studies
ELE 180	Residential Wiring I	4	Technical Studies
ELE 182	Residential Wiring Lab	4	Technical Studies
ELE 150	National Electrical Code I	4	Technical Studies
ELE 185	Solar and Wind Power Generation	3	Technical Studies
SAF 135	Safety/OSHA 30	3	Technical Studies

Spring

Course #	Course Title	Credits	Function
ELE 130	Commercial Wiring I	4	Technical Studies
ELE 132	Commercial Wiring Lab	4	Technical Studies
ELE 135	Low Voltage Wiring	2	Technical Studies
ELE 140	Motor Controls	2	Technical Studies
ELE 160	National Electrical Code II	4	Technical Studies
	Humanities Elective*	3	General Studies

Summer

Course #	Course Title	Credits	Function
ELE 170	Programmable Logic Controllers	2	Technical Studies
MTH	Math Elective*	3	General Studies

Fall

Course #	Course Title	Credits	Function
ELE 190	Fire Alarm, Emergency, and Health Care Systems	3	Technical Studies
ENG 101	Composition I*	3	General Studies
	Social Science Elective*	3	General Studies
	Communication Elective*	3	General Studies

* **Kansas Systemwide General Education**

Fall

Course #	Course Title	Credits	Function
ELE 120	AC/DC Circuits	4	Technical Studies
ELE 110	Print Reading	2	Technical Studies
ELE 180	Residential Wiring I	4	Technical Studies
ELE 182	Residential Wiring Lab	4	Technical Studies
ELE 150	National Electrical Code I	4	Technical Studies
SAF 135	Safety/OSHA 30	3	Technical Studies

Spring

Course #	Course Title	Credits	Function
ELE 130	Commercial Wiring I	4	Technical Studies
ELE 132	Commercial Wiring Lab	4	Technical Studies
ELE 135	Low Voltage Wiring	2	Technical Studies
ELE 140	Motor Controls	2	Technical Studies
ELE 160	National Electrical Code II	4	Technical Studies