Kentucky CTE

Engineering Technology: Power and Energy Equipment Technology 210142 (2026–2027)

Apply the design process involving problem identification, conceptualization, research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation. 1	1 Apply the design process involving problem identification, conceptualization, research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation. 1
Describe sources of energy. 2	2 Describe sources of energy. 2
Demonstrate an understanding of the cultural, social, economic, and political effects of power and energy technology. 3	3 Demonstrate an understanding of the cultural, social, economic, and political effects of power and energy technology. 3
Demonstrate an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in pr	4 Demonstrate an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem-solving. 4

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Demonstrate the ability to use and maintain technological products and systems. 5	**5 Demonstrate the ability to use and maintain technological products and systems.** 5
Demonstrate an understanding of and be able to select and use energy and power technologies. 6	**6 Demonstrate an understanding of and be able to select and use energy and power technologies.** 6
Demonstrate safe and appropriate use of tools, machines, and materials in power and energy technology. 7	**7 Demonstrate safe and appropriate use of tools, machines, and materials in power and energy technology.** 7
Demonstrate technical knowledge and skills related to power and energy systems. 8	**8 Demonstrate technical knowledge and skills related to power and energy systems.** 8
Demonstrate technical knowledge and skills in steam power technology. 9	**9 Demonstrate technical knowledge and skills in steam power technology.** 9
Demonstrate technical knowledge and skills in hydraulic and pneumatic power technology. 10	**10 Demonstrate technical knowledge and skills in hydraulic and pneumatic power technology.** 10
Demonstrate technical knowledge and skills in electric power technology. 11	**11 Demonstrate technical knowledge and skills in electric power technology.** 11
Demonstrate technical knowledge and skills about solar cells and fuel cells. 12	**12 Demonstrate technical knowledge and skills about solar cells and fuel cells.** 12
Measure and report the power and efficiency of po sy	**13 Measure and report the power and efficiency of power-producing systems.** 13

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Conduct a research and experimentation project on an energy and power system. 14	**14** **Conduct a research and experimentation project on an energy and power system.** 14
Demonstrate an understanding of career opportunities and requirements in the field of power and energy technology. 15	**15** **Demonstrate an understanding of career opportunities and requirements in the field of power and energy technology.** 15

Standard