Kentucky CTE

Engineering Technology: Introduction to Alternative Energy 210242 (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
Summarize the value of alternative energy. 2	2 Summarize the value of alternative energy. 2
Describe the importance of professional ethics and legal responsibilities with regard to alternative energy opportunities. 3	3 Describe the importance of professional ethics and legal responsibilities with regard to alternative energy opportunities. 3
Explain the significance of various alternative sources of energy. 4	4 Explain the significance of various alternative sources of energy. 4
Demonstrate personal money-management concepts, procedures, and strategies for alternative energy use 5	5 Demonstrate personal money-management concepts, procedures, and strategies for alternative energy use. 5

Skip to main content

Identify the pioneers in the field of developing energy alternatives. 6	6 Identify the pioneers in the field of developing energy alternatives. 6
Identify how the characteristics of goal-directed research impact technology. 7	7 Identify how the characteristics of goal-directed research impact technology. 7
Describe factors that motivate technological development, such as profit, function, form, and quality. 8	8 Describe factors that motivate technological development, such as profit, function, form, and quality. 8
Differentiate between petroleum diesel and biodiesel and between the operation of a gasoline engine and a diesel engine. 9	9 Differentiate between petroleum diesel and biodiesel and between the operation of a gasoline engine and a diesel engine. 9
Trace the flow of energy through an ecosystem. 10	10 Trace the flow of energy through an ecosystem. 10
Know the basic structure and characteristics of atoms, including how they bond. 11	11 Know the basic structure and characteristics of atoms, including how they bond. 11
Analyze current and emerging issues (such as ethical, social, legal, environmental, political, and privacy) related to technology to identify appropriate and inappropriate applications of technology. 12	12 Analyze current and emerging issues (such as ethical, social, legal, environmental, political, and privacy) related to technology to identify appropriate and inappropriate applications of technology. 12
Describe how electricity can be generated from ra	13 Describe how electricity can be generated from radioactive sources. 13

Design, construct, and assess alternative solutions to technological problems that minimize/alleviate negative impacts. 14	**14 Design, construct, and assess alternative solutions to technological problems that minimize/alleviate negative impacts.** 14
Understand and utilize communication skills to plan for and accomplish objectives/goals. 15	**15 Understand and utilize communication skills to plan for and accomplish objectives/goals.** 15

Standard