Kentucky CTE

Engineering Technology: Global Energy Issues 210244 (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 basic concepts of energy and power, including types of energy, conversion of energy, and conservation of energy and energy analysis. 2	2 Describe basic concepts of energy and power, including types of energy, conversion of energy, and conservation of energy and energy analysis. 2
Understand and apply sustainability in various aspects of the world around them, including the campus, local, national and global initiatives. 3	3 Understand and apply sustainability in various aspects of the world around them, including the campus, local, national and global initiatives. 3
Explore, review and discuss the current mix of energy sources in use arc inc Skip to main content gas, oil, nuclear, solar,	4 Explore, review and discuss the current mix of energy sources in use around the world, including coal, natural gas, oil, nuclear, solar, wind, geothermal, hydro, and biomass. 4

wind, geothermal, hydro, and biomass. 4	
Prepare a presentation on the basics of electric power, including emerging issues of smart grid transmission and distribution. 5	5 Prepare a presentation on the basics of electric power, including emerging issues of smart grid transmission and distribution. 5
Understand and discuss the basic environmental issues with energy generation and use the basic policy issues of power and energy, including environmental regulation, pricing, and development. 6	6 Understand and discuss the basic environmental issues with energy generation and use the basic policy issues of power and energy, including environmental regulation, pricing, and development. 6
Explain the basic economic aspects of power and energy, including energy markets. 7	7 Explain the basic economic aspects of power and energy, including energy markets. 7
Describe the relationships between energy use and economic activities, standard of living, and cultures. 8	8 Describe the relationships between energy use and economic activities, standard of living, and cultures. 8
Investigate and interpret the basic geopolitical issues of power, including national security and economic security. By using critical and creative inquiry, students will demonstrate a grasp of the global inequalities and diversities that exist with respect to energy ac	9 Investigate and interpret the basic geopolitical issues of power, including national security and economic security. By using critical and creative inquiry, students will demonstrate a grasp of the global inequalities and diversities that exist with respect to energy across the world. 9

Standard