Kentucky CTE

Engineering Technology: Engineering I

Apply the design process involving EI1	**a** problem identification, conceptualization, and research EI1A
	b refinement of preliminary ideas, design analysis, development and implementation EI1B
	c detailed documentation of final design, optimization and final presentation. EI1C
Perform basic computer-aided drafting functions and develop knowledge and skills in the use of CAD (computer-aided design) software. EI2	**2** Perform basic computer-aided drafting functions and develop knowledge and skills in the use of CAD (computer-aided design) software. EI2
Research information about professional engineering-related organizations. EI3	**3** Research information about professional engineering-related organizations. EI3
Use principles and elements of design including EI4	**a** portfolio development containing various written work, drawings, models, and other documentation. EI4A
Perform sketching and visualization using proper techniques and tools to produce pictorial, annotated sketches, multi-view or orthographic drawings using proper and accurate measurements. EI5	**5** Perform sketching and visualization using proper techniques and tools to produce pictorial, annotated sketches, multi-view or orthographic drawings using proper and accurate measurements. EI5
Apply geometric rel an various polygons,	**6** Apply geometric relationships of forms and shapes, lines, various polygons, eometric constraints, Cartesian coordinate system, and origin planes. EI6

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geometric constraints, Cartesian coordinate system, and origin planes. EI6	
Perform modeling using conceptual, graphical, physical, mathematical, and computergenerated techniques, including 3-dimensional software. EI7	**7** **Perform modeling using conceptual, graphical, physical, mathematical, and computergenerated techniques, including 3-dimensional software.** EI7
Conduct model analysis and verification. EI8	**8** **Conduct model analysis and verification.** EI8
Create model documentation including working drawings, dimensioning, and annotations. EI9	**9** **Create model documentation including working drawings, dimensioning, and annotations.** EI9
Develop product presentations using proper communication techniques and appropriate presentation aids. EI10	**10** **Develop product presentations using proper communication techniques and appropriate presentation aids.** EI10