

Engineering Technology: Mechanical Engineering

Apply the design process involving **MEE1**

- a** problem identification, conceptualization, and research **MEE1A**

- b** refinement of preliminary ideas, design analysis, development and implementation **MEE1B**

- c** detailed documentation of final design, optimization and final presentation **MEE1C**

Demonstrate an understanding of manufacturing, its history, models, and procedures. **MEE2**

- 2** Demonstrate an understanding of manufacturing, its history, models, and procedures. **MEE2**

Demonstrate an understanding of **MEE3**

- a** control systems **MEE3A**

- b** methods to describe or document their processes **MEE3B**

Demonstrate an understanding of the cost of manufacturing. **MEE4**

- 4** Demonstrate an understanding of the cost of manufacturing. **MEE4**

Demonstrate proficiency in designing products for manufacturability. **MEE5**

- 5** Demonstrate proficiency in designing products for manufacturability. **MEE5**

Demonstrate an understanding of manufacturing processes. **MEE6**

- 6** Demonstrate an understanding of manufacturing processes. **MEE6**

Demonstrate an understanding of computer numeric control (CNC) as it relates to product

- 7** Demonstrate an understanding of computer numeric control (CNC) as it relates to product design and development. **MEE7**

design and development. MEE7

Demonstrate an understanding of automation and robotics relative to the manufacturing process. MEE8

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Demonstrate an understanding of the elements of power and the associated mathematics. MEE9

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Build, program, and configure a robot to perform predefined tasks. MEE10

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Demonstrate an understanding of the elements of Computer Integrated Manufacturing (CIM). MEE11

11 Demonstrate an understanding of the elements of Computer Integrated Manufacturing (CIM). MEE11

Demonstrate proficiency in designing an efficient flexible manufacturing system (FMS) that contains Computer Integrated Manufacturing (CIM) elements. MEE12

12 Demonstrate proficiency in designing an efficient flexible manufacturing system (FMS) that contains Computer Integrated Manufacturing (CIM) elements. MEE12