

# Technology Engineering and Design: TE11

Understand that most inventions and innovations are the result of an evolutionary process and how a series of refinements leads to an improvement in a technological device. [TE11 1.00](#)

**1.01** Understand that most inventions and innovations are the result of an evolutionary process. [TE11 1.01](#)

**1.02** Understand how new technologies are used to create new processes and products. [TE11 1.02](#)

**1.03** Classify the factors that impact the demand and design of technology. [TE11 1.03](#)

**1.04** Explain the research and development process as a problem-solving approach. [TE11 1.04](#)

Understand how technology changes history. [TE11 2.00](#)

**2.01** Analyze the historic significance and interaction of technological advancements within society and the environment. [TE11 2.01](#)

**2.02** Understand the evolutionary process of technological development throughout history. [TE11 2.02](#)

Apply the universal systems model to troubleshoot technological systems. [TE11 3.00](#)

**3.01** Differentiate the nine core technologies and their relationship within larger systems and products. [TE11 3.01](#)

**3.02** Analyze a functional system using the Universal Systems Model. [TE11 3.02](#)

**3.03** Analyze the function of a product by reverse engineering. [TE11 3.03](#)

**3.04** Apply procedures to troubleshoot a product and create a diagram and/or simulation. [TE11 3.04](#)

Analyze the engineering design process as a systematic, iterative problem solving method that produces solutions to meet human wants and desires. [TE11 4.00](#)

**4.01** Apply design principles when generating solutions to problems. [TE11 4.01](#)

**4.02** Apply the engineering design process to produce solutions to problems. [TE11 4.02](#)

**4.03** Interpret criteria and constraints to develop solutions to problems. [TE11 4.03](#)

**4.04** Apply procedures to construct models that meet design solutions. [TE11 4.04](#)

**4.05** Analyze data used in the engineering design process. [TE11 4.05](#)

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**4.06 Propose an engineering design solution to the intended audience.** TE11 4.06

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**Analyze technology relationships to the designed world.** TE11 5.00

**5.01 Analyze energy and power systems.** TE11 5.01

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**5.02 Analyze types of manufacturing and the properties of materials problems.** TE11 5.02

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**5.03 Classify the types of construction and the factors that affect the design of structures.** TE11 5.03

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**5.04 Classify information and communication systems and their interaction with society.** TE11 5.04

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**5.05 Explain the relationship between agriculture and transportation.** TE11 5.05

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**5.06 Explain the technologies integrated in telemedicine.** TE11 5.06