

Introductory to Engineering Design

Freshman Survey Course that gives students an opportunity to find out if Engineering is a career they would interested in. They can elect to remain as an official member of the Engineering Academy in their sophomore year.

Students learn about the History and Careers of engineering

Design:

Building Mechanisms: The universal seventeen different Mechanical Systems,
Fluid System, Control Systems, Electrical Systems

Reverse Engineering: Redesigning

Measurement Skills: Inches to Dial Calipers, Dimensioning

Technical Sketching and Drawing: Visual Perspective, Isometric, Orthographic

Modeling Skills: Geometry of Design, 3D modeling and Printing

Documentation: Technical writing in an Engineers Notebook, Ethics

Laser Design: Design and Cut

Electronics:

Basic Circuit Design

Students are learning about building and soldering circuit boards.

Robotics:

Students are learning how to build and program robots with Icons.

Students are learning how to build and fly underwater robots.

Projects:

3D Drawing, Printing, and Animating

Dimensioned Drawings

Robotic Mechanisms

Basic Electronics

Mechanisms

Wind Turbines

Automata

Automoblox

Underwater Robotics

Design and create a Christmas Present

Laser Cutting

