Discover ENGINEERING

bt Butler Tech *in Fairfield City Schools*

Industry Overview

Engineering is a growing industry that offers opportunities to develop and work with various technologies. Engineers use science, critical thinking, and mathematics to develop new ideas, products, and technologies, often to make life simpler or more efficient.

Butler Tech Engineering program overview

Students in the Engineering pathway learn to design and create solutions to complex problems using cutting-edge technologies. You'll learn to employ robotics to perform various operations, apply electrical theory and use electronic devices to control machines, and manufacture parts and devices.
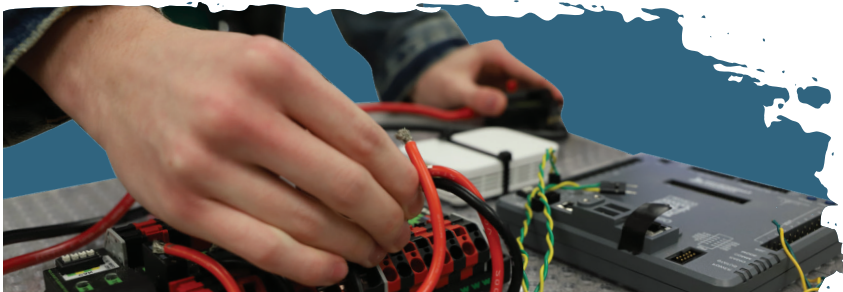
Plus, students in this pathway can complete an associate degree in Mechanical Engineering Technology (ABET accredited) while in high school.

Tools and Equipment

- SolidWorks; xDesign; Autodesk Inventor; Autodesk Fusion 360
- 3-D Printers – Plastic, ABS, PLA, PTG
- Pneumatic Logic Test Board
- CNC Machines
- Lathe
- Power Equipment – drill presses; band saws

Student Organization

TSA - Technology Student Association

Coursework

- 3-D modeling
- Mechanics, energy, statics, strength of materials and kinematics
- Applied mathematics
- Robotic operations and system configurations
- Coding, compiling and debugging
- Pneumatic systems
- Automation and modern manufacturing
- Employ the engineering design process to generate solutions to proposed problems
- Problem solving analytics

Skills

Active Listening
Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Complex Problem Solving
Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Judgment and Decision Making
Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Personality

Investigate
People interested in this work like activities that include ideas, thinking, and figuring things out. They do well at jobs that need:

- Analytical Thinking
- Attention to Detail
- Initiative
- Innovation
- Integrity
- Persistence

Career Pathways

- Engineer
- Manufacturing Installer
- Manufacturing Maintenance
- Quality Control Inspector
- Robotic Programmer

"This course provides a fantastic chance to apply the engineering design process from design through manufacturing to finished product with all 'hands-on' coursework. It is a free-form educational experience that students can adapt to their own style of learning."
Student, *Engineering*

"This is an amazing opportunity to earn my Associate's Degree while still in high school in a very high demand career field."
Senior student, *Engineering*

Discover Engineering through Butler Tech and pursue a career that's right for you.

Butler Tech connects high school students to career technical education in more ways than ever. Complete your traditional academic courses in your school and enhance your educational experience with career-focused labs and on-the-job training. Each moment in a Butler Tech career technical course is a step toward building your future.

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See your guidance counselor for registration information.

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