Discover
ENGINEERING

bt Butler Tech

in Colerain and Northwest Local 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.

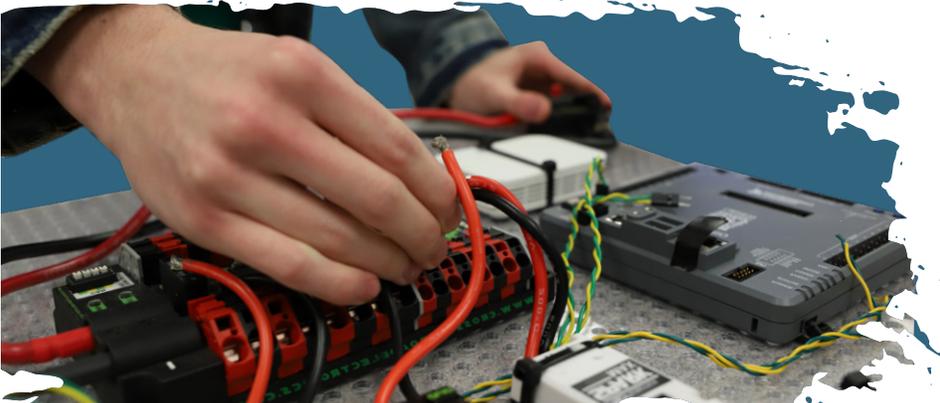## Butler Tech Engineering program overview

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.

Tools and Equipment

• 3-D Printers – Plastic, ABS, PLA, Laser Engraver

• CNC Machines

• Power Equipment – drill presses; band saws

• Onshape and Fusion 360

Student Organization

Students in the Engineering Program can amplify their learning through involvement in Technology Student Association (TSA) and SkillsUSA. These organizations provide students with the opportunity to apply their engineering knowledge to real-world challenges, compete in regional and state events, develop leadership skills, and collaborate with peers who share a passion for innovation and problem-solving.

Coursework

• 3-D modeling

• Applied mathematics

• Automation and modern manufacturing

• Coding, compiling and debugging

• Employ the engineering design process to generate solutions to proposed problems

• Mechanics, energy, statics, strength of materials and kinematics

• Pneumatic systems

• Problem solving analytics

• Robotic operations and system configurations

Certification

Fusion 360

OHSA

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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.
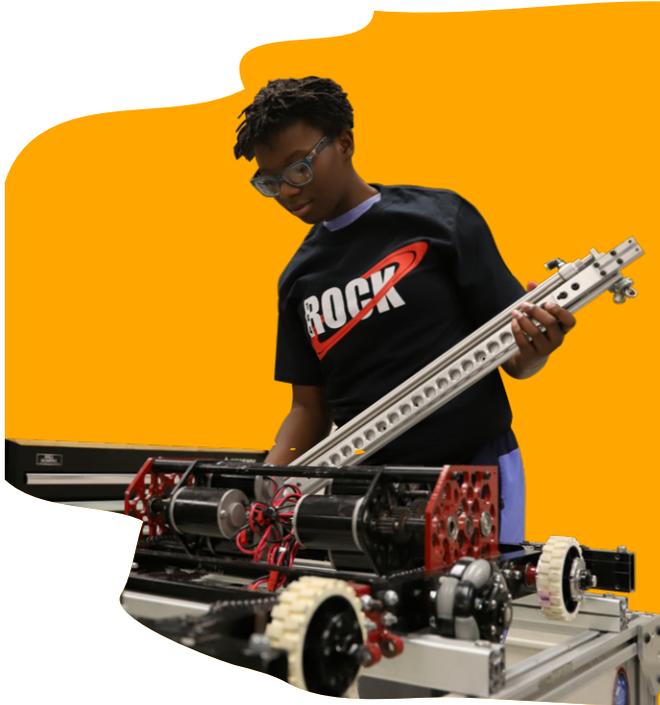
Personality

Investigative
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, *Colerain HS*

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 half of each school day and fill the other half of your day with career-focused labs and on-the-job training. Each moment in a Butler Tech career technical program is a step toward building your future.

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See your guidance counselor for application information.

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