Butler Tech In Your School

Discover PLTW – ENGINEERING

Butler Tech in Monroe City Schools

Program Overview

Whether a student is curious to understand more about engineering, has decided to pursue a career, or simply wants to think critically, work collaboratively, and explore how math and science work in his or her everyday life, Project Lead The Way's Pathway to Engineering program provides a track for success. Students engage in open-ended problem solving, learn and apply the engineering design process, and develop vital teamwork, communication, and critical-thinking skills.

Throughout the courses, students use the same industry leading technology and software as the world's top companies. These courses provide students who are interested in exploring careers in various types of Engineering and Manufacturing, an avenue in high school to take PLTW courses for high school credit as a preparation for careers or post-secondary study in STEM fields.

This Engineering Pathway offered by Butler Tech at MHS is a follow-up to the entry-level STEM classes that were offered at MMS.

Butler Tech offers the following PLTW Engineering courses in Monroe Local Schools:

- **Engineering Design**
- **Principles of Engineering**
- **Civil Engineering and Architecture**

"Project-based instruction allows students to learn through hands-on activities. As the students grow, it is exciting to see students take ownership and control of their learning through student selected projects."

Instructor,
PLTW – Engineering

Butler Tech PTLW – Engineering Course offerings at Middletown

Engineering Design

This full-year course uses a project-based learning approach to teach engineering design principles. Students will encounter instant challenges, cardboard bridges, cardboard chairs, and CO2 Dragster challenges to teach proper documentation, technical sketching, statistics, geometric modeling, reverse engineering, team dynamics, and computer-animated drawing (CAD). Students who took Design and Modeling in Junior High School will enjoy this class.

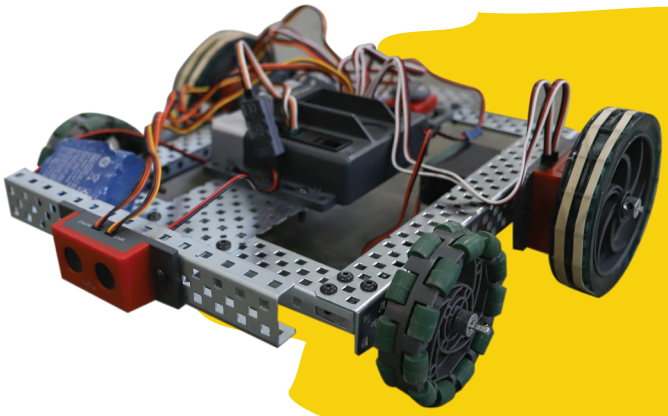
Principles of Engineering

This full-year project-based course uses problems that engage and challenge students to explore a broad range of engineering topics. Topics include mechanisms, the strength of materials and structures, automation, and motion. Students develop skills in problem-solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Robotics are a major theme in this course.

Civil Engineering and Architecture

This full-year course is designed for students to apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architectural design software in this full-year course. Through project-based learning, students will encounter building design in residential and commercial, cost efficiency, structures, services, and utilities. The course completion involves a large-scale commercial design problem that students will need to solve.

The second semester typically involves a practical community capstone project. Students will apply skills from 2 or 3 years of engineering to complete a project for the school or community. Examples include storage sheds and graduation platforms.



"I've learned so much in this class and have a great idea of what I want to pursue in my future."
Student, *PLTW – Engineering*

Discover

PLTW – 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.

Butler Tech

See your guidance counselor for registration information.

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