

*Discover*

# PLTW – ENGINEERING DESIGN

## 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.

**"Project based instruction provides students that ability 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 and Design*

**bt** Butler  
Tech  
within Madison  
Local School District

## Coursework

- Engineering Essentials for Madison High School
- Principles of Engineering



## PLTW Engineering and Design Course Offerings at Madison

### Engineering Essentials for Madison High School

This Project Lead the Way (PLTW) course is entry level for students considering a pathway to an engineering field. Students explore the breadth of engineering career opportunities and experiences as they solve engaging and challenging real-world problems like creating a natural relief center system or creating a solution to improve the safety and well-being of local citizens.

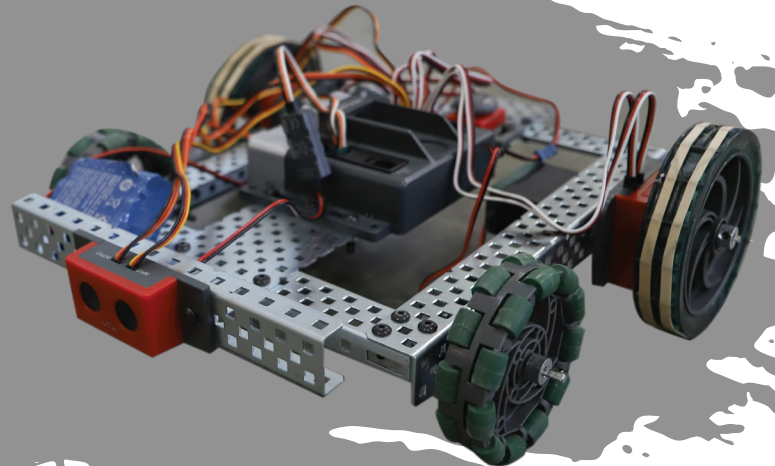
### Principles of Engineering

Through problems that engage and challenge, students explore a broad range of engineering topics. Including 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.

*Prerequisite – Engineering Essentials for Madison High School*

**"Seeing the pride and joy students experience when they surprise themselves with what they've accomplished is priceless."**

Instructor,  
*PLTW – Engineering and Design*



**Discover** PLTW –  
**Engineering and Design**  
**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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