



Our Engineering courses are a great way for students to see if Engineering is something that interests them. This is a very prestigious program that colleges know about. Here are some other great things you can expect to get out of our courses:

- 1) See how Science is applied to make differences in the world around you.
- 2) Learn to work in teams.
- 3) Develop great problem solving & communication skills.
- 4) Have fun!

[Sherwood PLTW student quotes](#)

“PLTW is truly a fantastic introduction to the field of engineering and incorporates assignments that help you to visualize yourself as an engineer and explore the education that comes with it.”

-Adam Berger, 2013 Sherwood Graduate
2017 UMD-College Park Bioengineering Graduate
Currently pursuing a PhD in biomedical engineering at MIT.

“A lot of the material we learned was covered in the basic mechanics classes I had to take during my freshman and sophomore years of college. It gave me a leg up in comparison to some of my peers who never had exposure to the concepts taught in Intro and POE.”

-Dema Tzamaras, 2012 Sherwood Graduate
2016 UMD-College Park Civil Engineering Graduate
2017 University of California-Berkeley Masters Degree Graduate

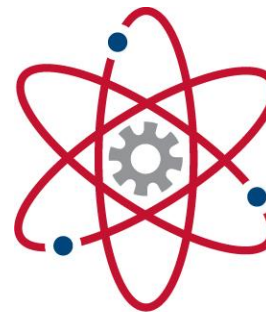
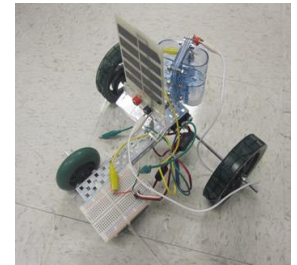
“Taking PLTW courses has given me a head start with assignments, and a step ahead of the other students that is so valuable in such a competitive field.”

-Lauren Paese, 2012 Sherwood Graduate
2017 Penn State Civil Engineering & Architecture Graduate

For more information, visit our website,
SherwoodEngineering.org or
Email Brendan Lees,
Brendan_R_Lees@mcpsmd.org



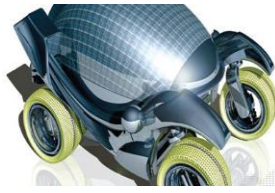
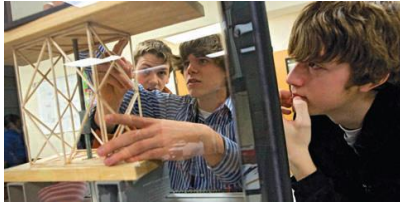
Sherwood High School Engineering Program



PROJECT LEAD THE WAY

PLTW

Igniting imagination and innovation through learning.



Sherwood Engineering Courses

IED

Introduction to Engineering Design

Students use the design process and industry standard 3D modeling software to design solutions to proposed problems.

POE

Principles of Engineering

Students are introduced to all engineering fields. Major concepts are mechanisms, alternative energy design, statics, structures, materials engineering, robotics, and kinematics.

DE

Digital Electronics

Students program integrated circuit kits and microcontrollers, design, solder and breadboard real world circuits, and learn to use industry standard Circuit Design Software. The overall focus is to learn how all electronics around us are designed and created.

CEA

Civil Engineering & Architecture

Students design and develop residential and commercial properties using 3D architectural design software. They are also exposed to all aspects of CE which include environmental, structural, and water resources engineering.

AE

Aerospace Engineering

This course propels students' learning in the fundamentals of atmospheric and space flight. They learn basic orbital mechanics using industry-standard software. They also explore robot systems through projects such as remotely operated vehicles.

EDD

Engineering Design & Development

Students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process.

The **Sherwood High School PLTW Pathway To Engineering Program** is a sequence of courses, which follows a proven hands-on, real-world problem solving approach to learning, that gets students excited about engineering. Throughout the courses, students learn and apply the design process, acquire strong teamwork and communication proficiency and develop organizational, critical-thinking, and problem solving skills. Students learn how to use the same industry-leading 3D design software that's used by companies like **Intel, Lockheed Martin, and Pixar**. They explore alternative energy sources so our world can eliminate our dependency on fossil fuels. They apply biological and engineering concepts related to biomechanics – **think robotics**. Students design, test, and actually construct circuits and devices such as **smart phones and tablets**, and work collaboratively on a culminating capstone project. Some PLTW students have even **received US patents**.