

# Rockville HS - Project Lead the Way (PLTW) POS

Requirement for Program of Study completion: All courses in the following chart are required for pathway completion. All students who take the upper-level courses beyond Principles of Engineering are in the PLTW program.

Title	Gr	Descriptions
<p>Introduction to Engineering Design (IED)</p> <p>COURSE CODE: TEC2017 A/B</p> <p><b>Corequisite:</b> <b><i>Algebra 1</i></b></p>	9-12	<p>This is an introductory course that develops students' problem-solving skills, with an emphasis on visualization and communication skills using a computer and a 3- D solid modeling software. This course emphasizes the development of a design using computer software to produce, analyze, and evaluate models of projects and solutions. Students will study the design concepts of form and function and then use state-of-the-art technology to translate conceptual design into reproducible products.</p>
<p>Principles of Engineering (POE)</p> <p>COURSE CODE: ENR2016 A/B</p> <p><b>Prerequisite:</b> <b><i>IED and Algebra 1</i></b> <b>Corequisite</b> <b><i>Geometry</i></b></p>	9-12	<p>This is a broad-based survey course to help students understand engineering and engineering technology and identify career possibilities. This course provides an overview of engineering and engineering technology. Students develop problem solving skills by tackling real-world engineering problems. Through theory and practical hands-on experiences, students address the emerging social and political consequences of technological change.</p>
<p>Digital Electronics (DE)</p> <p>COURSE CODE: ENR2014 A/B</p> <p><b>Prerequisite:</b> <b><i>IED and POE + enrollment in PLTW program</i></b></p>	10-12	<p>This course introduces students to applied digital logic, a key element of careers in engineering and engineering technology. This course explores the smart circuits found in watches, calculators, video games, and computers. Students use industry-standard computer software in testing and analyzing digital circuitry. They design circuits to solve problems and use appropriate components to build their designs. Students use mathematics and science in solving real-world engineering problems.</p>
<p>Aerospace Engineering (AE)</p> <p>COURSE CODE: ENR2026 A/B</p> <p><b>Prerequisite:</b> <b><i>IED and POE + enrollment in PLTW program</i></b> <b>Corequisite</b> <b><i>Digital Electronics A/B</i></b></p>	10-12	<p>This is the capstone course for the Project Lead The Way (PLTW) advanced engineering program. At the end of the course, teams present their research papers and defend their projects to a panel of engineers, business leaders, and engineering college educators for a professional review and feedback. This course equips students with the independent study skills that they will need in postsecondary education and careers in engineering and engineering technology.</p>

<p>Civil Engineering A/B</p> <p>COURSE CODE: ENR2009 A/B</p> <p><b>Prerequisite:</b> <i>IED and POE</i></p> <p><b>Corequisite:</b> <i>DE + Enrollment in PLTW program</i></p>	<p>10-12</p>	<p>This course provides an overview of the fields of civil engineering and architecture, emphasizing the interrelationship and interdependence of both fields. Students use state-of-the-art software to solve real-world problems and communicate solutions. Students learn about the roles of civil engineers and architects, project planning, site planning, building and engineering design, and project documentation and presentation.</p>
<p>Engineering Design and Development (EDD)</p> <p>COURSE CODE: ENR2015 A/B</p> <p><b>Prerequisite:</b> <i>IED, POE, AE and DE + Enrollment in PLTW program</i></p>	<p>12</p>	<p>This is the capstone course for the Project Lead the Way (PLTW) advanced engineering program. At the end of the course, teams present their research papers and defend their project to a panel of engineers, business leaders, and engineering college educators for a professional review and feedback. This course equips students with the independent study skills that they will need in postsecondary education and careers in engineering and engineering technology.</p>

**Program of Study and IBCP**

IED - POE - DE or AE or CE - EDD

***For any other options or questions, please see Ms. Julie James, Resource Teacher (RT) for guidance and information.***