

# Indiana High-Quality Curricular Materials for High School Engineering

The Indiana Dept of Education has created an Indiana High-Quality Curricular Materials advisory list for High School Engineering, and PLTW is proud to have been selected to that list. Here are the descriptions of the PLTW curriculum that helps you meet the state's engineering standards.



PLTW  
**ENGINEERING**

## Engineering Courses

~160-180 days/each course

GRADES

**9-12**

### Aerospace Engineering

Students explore the physics of flight and space through software simulations and hands-on experiences. They bring concepts to life by designing and testing an airfoil, propulsion system, and a rocket. Students learn how these concepts apply to a career in aerospace engineering and other engineering fields.

### Civil Engineering and Architecture

Students learn important aspects of building and site design and development, and then they apply what they know to design both a residential building and a commercial facility.

### Computer Integrated Manufacturing

Students discover and explore manufacturing processes, product design, robotics, and automation, and then they apply what they have learned to design solutions for real-world manufacturing problems.

### Digital Electronics

Students explore the foundations of computing by engaging in circuit design processes to create combinational logic and sequential logic (memory) as electrical engineers do in industry.

GRADES

9-12

## Environmental Sustainability

Students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply, and renewable energy.

## Introduction to Engineering Design

Students dig deep into the engineering design process, applying math, science, and engineering technology to hands-on projects like designing a new toy or improving an existing product.

## Principles of Engineering

Students explore how modern engineers help improve the world through diverse engineering fields, such as product design, mechanical design, infrastructure, and sustainability. Students learn and use some of the cutting edge tools engineers use in robotics, 3D modeling, programming, and prototyping.

**We'd love to discuss your specific engineering needs, your current implementation, and how PLTW can further energize your curriculum.**

Visit [pltw.org/in-high-quality-curricular-materials](https://pltw.org/in-high-quality-curricular-materials), or contact our Solution Center - [877.335.7589](tel:877.335.7589) or [solutioncenter@pltw.org](mailto:solutioncenter@pltw.org) - to schedule a conversation.

