

Manufacturing, Engineering, and Technology



PLTW Pre-Engineering Program

PROGRAM OF STUDY OVERVIEW:

The Project Lead the Way (PLTW) Pre-Engineering Program prepares students for further education and careers in engineering and engineering technology. Students complete foundation-level courses in engineering and then select an area of specialization: Computer Integrated Manufacturing, Civil Engineering and Architecture, Aerospace Engineering, or Computer Science & Software for Engineering. In the final course, students complete an industry-mentored capstone project.



Entrance Grades	Introduction to Engineering Design 1 Credit	Principles of Engineering 1 Credit	Digital Electronics 1 Credit	Pathway Course 1 Credit	Engineering Design & Development 1 Credit COMPLETER
9th Grade Entrance (By 8th Grade Application)	Spring Freshman	Fall Sophomore	Spring Junior	Spring Junior	Fall Senior
10th Grade Entrance	Fall Sophomore	Spring Sophomore	Fall Junior	Fall Junior	Spring Junior
11th Grade Entrance	Fall Junior	Spring Junior	Fall Senior	Fall Senior	Spring Senior

IN THIS PROGRAM

Students will:

- Engage in real-world engineering process;
- Work with peers and members of the engineering industry to develop innovative solutions to problems;
- Gain a thorough understanding of the engineering design process;
- Work with a variety of technology, including robotics, 3-D Printers; and circuit design software; and
- Visit NASA at Wallop's Island and the Applied Physics Laboratory at John Hopkins.

COURSE SEQUENCE

- Introduction to Engineering Design (A)(T)
- Principles of Engineering (T)
- Digital Electronics (A) (T) (DE)
- Choice of: Aerospace Engineering (T), Computer Integrated Manufacturing (T), Civil Engineering and Architecture (A) (T), or Computer Science & Software for Engineering (A) (T)
- Engineering Design and Development (T) (DE)

(A) articulated college credit (T) transcribed college credit (DE) dual college credit

For course descriptions, please see the WCPS Course Catalog @ <https://www.worcesterk12.com/>

STUDENT ORGANIZATION



EARLY COLLEGE PROGRAM PARTNERS

- Salisbury University
- UMES
- UMBC
- Wor-Wic Community College
- Rochester Institute of Technology