

FREQUENTLY ASKED QUESTIONS

If I am accepted into the program now, do I have to continue if I do not like it?

The expectation is accepted students complete the PLTW program. We are searching for students who plan to commit to and complete the entire four-year program. However, on occasion, a student may exit the PLTW program due to extenuating circumstances.

What is the level of math required for the program?

Since engineering utilizes both math and science concepts, it is helpful for a student to display strength in these areas.

Is the program challenging?

Yes. The program is designed to be an academically challenging program to fully prepare the student for college. They are all weighted as college-level courses.

How “hands on” is the program?

If the student is a “hands on” person, then this program is for them. Numerous activities and projects are regularly used for assessment rather than traditional tests.

Is there any college credit given to students who successfully complete the program?

Yes! PLTW is an accredited program at SHS. Our students have the opportunity to earn college credit through Rochester Institute of Technology, or, University of New Haven. Many prestigious colleges are aware of the rigor of Southington High School’s PLTW program.

Since this is a program in the Technology and Engineering department, are there any girls in the classes?

Absolutely! We highly encourage female students to apply. Currently about 45% of our students are female.

Goals of *Project Lead the Way*

- To increase the number of young people who pursue engineering and engineering technology programs requiring a four or two-year college degree.
- To provide clear standards and expectations that allows student success in the program.
- To provide leadership and support that will produce continuous improvement and innovation in the program.
- To provide equitable and inclusive opportunities for all academically qualified students without regard to gender or ethnic origin.
- To reduce the future college attrition rates within four and two-year engineering and engineering technology degree programs.
- To contribute to the continuance of America’s national prosperity.



SHS’s PLTW Application can be found online at the Southington High Website Search ‘**PLTW**’

Southington High School Contacts

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Official Project Lead the Way Site

www.pltw.org

SOUTHINGTON HIGH SCHOOL

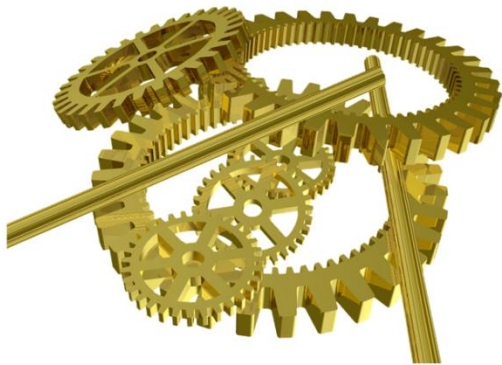


PROJECT LEAD THE WAY
PLTW

ENGINEERING PROGRAM

SOUTHINGTON HIGH SCHOOL'S ENGINEERING PROGRAM

Southington High School chose to implement a national pre-engineering program called *Project Lead the Way (PLTW)*. SHS was the first high school to have an accredited program in the state of Connecticut. Enrolled students are devoting most of their elective courses offered during their tenure at SHS to preparing themselves for a career in engineering. The program is a rigorous series of courses that challenges the student to implement the math and science concepts they are learning in their core courses to engineering principles. A national standard based curriculum is established and followed. In addition, there is the advantage of an opportunity to receive RIT college credit for many of the required courses. PLTW at SHS has a Professional Advisory Board from the community that offers support and advisement to the program. Students enrolled in the PLTW Program progress through a series of five sequential courses including the capstone course in their senior year. This course is one in which the students work as a group utilizing research and design in developing a project. With completion of these courses, students who are interested in pursuing engineering in college will have experienced what a career in engineering entails.



PLTW PROGRAM COURSES AT SOUTHINGTON HIGH

Introduction to Engineering Design (IED):

A course that teaches problem-solving skills using a design development process for products. Models of product solutions are created, analyzed and communicated using solid modeling computer design software.

Digital Electronics (DE):

A course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices in preparation for the electrical engineering discipline.

Principles of Engineering (POE):

A course that helps students understand the field of engineering and engineering technology. Fundamental principles of engineering including: engineering design process, simple machines, mechanisms, energy, fluid power, electricity, kinematics, materials, statics and structures, programming/robotics, and traffic studies.

Computer Integrated Manufacturing (CIM):

The course builds upon the 3D solid modeling skills developed within the Introduction to Engineering Design course. Students learn about the evolution and importance of manufacturing, manufacturing technologies, manufacturing processes, control systems/coding, CAD/CAM/CNC, robotics, efficiencies of the processes and designs, and automation.

Project Lead the Way Capstone (PLTW Capstone):

A course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor in this capstone course.

Field Trips: All students in the program attend field trips throughout the school year. By graduation, students will have visited at least three engineering colleges and four engineering corporations.

Sample Schedule for Students

Freshmen Year

PLTW (IED)	ENGLISH
GEOMETRY	WORLD LANGUAGE
EARTH SCIENCE	PE/HEALTH
CIVICS	ELECTIVE

Sophomore Year

PLTW (DE)	ENGLISH
ALGEBRA II	WORLD LANGUAGE
BIOLOGY	PE/ HEALTH
WORLD HISTORY	ELECTIVE

Junior Year

PLTW (POE)	ENGLISH
PLTW (CIM)	PRE-CALCULUS
CHEMISTRY	PE/HEALTH
US HISTORY	WORLD LANGUAGE

Senior Year

PLTW (EDD)	PE/HEALTH
CALCULUS	WORLD LANGUAGE
PHYSICS	ELECTIVE
ENGLISH	ELECTIVE