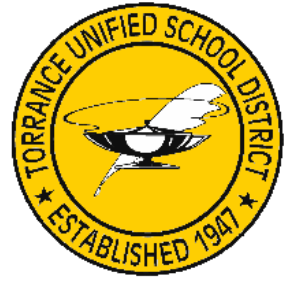


Engineering Design

Engineering & Architecture Industry



Program Overview

The Torrance Unified School District Engineering Design Pathway provides students with the academic and technical skills needed to be successful in the field of engineering. Students will learn how to CAD design, 3D modeling & printing, programming, logic design, applying scientific principles, and the engineering design process. All courses utilize the Project Lead the Way (PLTW) curriculum.



Course Sequence

PLTW Introduction to Engineering

PLTW Principles of Engineering

Courses Vary by School
Honors PLTW Digital Electronics
Honors PLTW Aerospace Engineering

Honors PLTW Engineering Design & Development

Student Experiences

Students are involved in **real-world learning experiences** on campus and in the community.

- Access to industry level equipment (Ex: CNC Machine, 3D printers, wind tunnels, laser cutter, etc.)
- Field Trip to a local engineering company
- Torrance Refinery Cardboard Regatta Competition
- Torrance Airport STEM Day
- Culminating student-led engineering project
- Membership in **First Robotics, StellarXplorers, or SkillsUSA** with the opportunity to participate in regional, state, and national competitions.

College & Career Ready

Students develop **soft skills** in communication, critical thinking, teamwork, leadership, and work ethic.

Students can earn an **industry certification** in

- Engineering Principles 1
- CAD Mechanical Design 1
- Mechanical Engineering Design Technician

Students have an opportunity to participate in **internships** at local companies and an Aero-Flex **pre-apprenticeship**.

Students can earn **college credit** through El Camino.

Students earn **UC/CSU "D" science credit** and are prepared to enter a **degree program** in Engineering.

