



# INTRODUCTION TO ENGINEERING DESIGN

2021 – 2022 SCHOOL YEAR

## COURSE DESCRIPTION

[Introduction to Engineering Design](#) (IED) is a Natomas High School engineering course that is part of the [Project Lead The Way \(PLTW\) Engineering Program](#). In IED, students explore engineering tools and apply the engineering design process. Utilizing a physical, virtual, and immersive activity-project-problem-based (APB) teaching and learning approach, students progress from completing structured activities to solving open-ended projects and problems that require them to plan, document, communicate, and develop professional skills along with prescient workflows.

The following is a summary of the units of study that are included in the course:

## COURSE OUTLINE

### Unit 1 – Design and Problem Solving

- Design Basics
- Visualization and Solid Modeling
- CAD Fundamentals
- Product Improvement

### Unit 2 – Assembly Design

- Put it Together
- Take it Apart
- A Material World
- Fix It

### Unit 3 – Thoughtful Product Design

- Responsible Design
- More Than Parts
- Solve a Problem

### Unit 4 – Making Things Move

- You've Got to Move It
- May the Force Be With You
- Automating Motion
- Make It Move