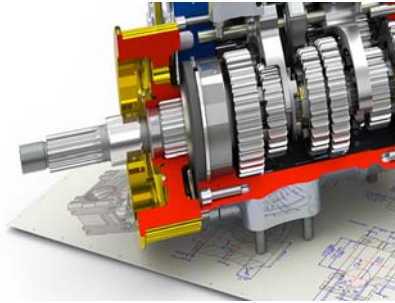


# SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS



## **INTRODUCTION TO PRODUCT DESIGN & DEVELOPMENT (1 credit)**

Students will be introduced to World of Product design and development. Students will learn the basics Computer Aided Design (CAD) Software SolidWorks. Learn how create CAD 3-D models and 2-D CAD drawings using SolidWorks. They will also be introduced to the use and operation of 3-D printers. **Prerequisite: The desire to learn.**

## **PRODUCT DESIGN & DEVELOPMENT I (2 credits)**

Students will learn the fundamentals of design engineering and technical drawing (drafting) through sketching and using the Computer Aided Design (CAD) software Solidworks. Students will learn the language of design and engineering through project based instruction. Projects will require students to understand and create 3-D CAD models, assemblies and single and multi-view drawings. Students will be given instruction in the use of 3-D printers and proper use of the PDAD Lab. This class is designed for students interested in the fields of drafting, product design, engineering, construction, manufacturing, assembly or trades requiring blueprint reading. Students will have the opportunity to receive certifications in SolidWorks CAD Software and articulated college credit. **Prerequisite: None**

## **PRODUCT DESIGN & DEVELOPMENT II (2 credits)**

Students will learn the basics in design and development through project-based instruction. Students work on projects that enhance team-building skills. Topics of study include: Advanced Computer Aided Design (CAD) solid modeling, design and manufacturing and the program management process. Students identify a creative way of solving a problem or inventing a better product, and then design a possible solution through the use of CAD. Students will have the opportunity to prototype their projects through the use of 3-D printers or the PDAD Lab. Original thinking and visualization are used throughout the process. This class prepares students for college studies or entry level jobs in areas of product design, engineering, construction, manufacturing or assembly. Students will have the opportunity to receive advanced certifications in SolidWorks and articulated college credit. **Prerequisite: Product Design & Development I**

**SolidWorks**

**CERTIFIED  
ASSOCIATE**