

Supporting Programs

Robotics— The school's robotics team, Stable Circuits Robotics FRC Team #6305 is a natural extension of the PID pathway. Hands-on experience in modeling all the way through the production of the product allows students to see first hand how their designs work.

Society of Women Engineers (SWENext) - is a club that meets at lunch to learn about careers and college opportunities in the STEM fields, specifically engineering.



ROBOTICS COMPETITION



The Stable Circuits 2019 robot.



Tesla Factory Tour

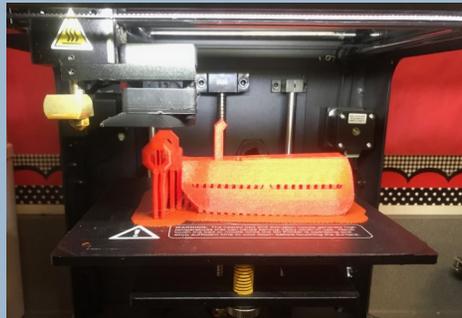
Industry Partnerships

ADCO Manufacturing
Anlin Windows and Doors
Betts Manufacturing
Bitwise Industries
Clovis Community College
Clovis Unified School District
Fresno County Superintendent of Schools
Fresno State, Lyles College of Engineering
Lyons Magnus
Scelzi Enterprises

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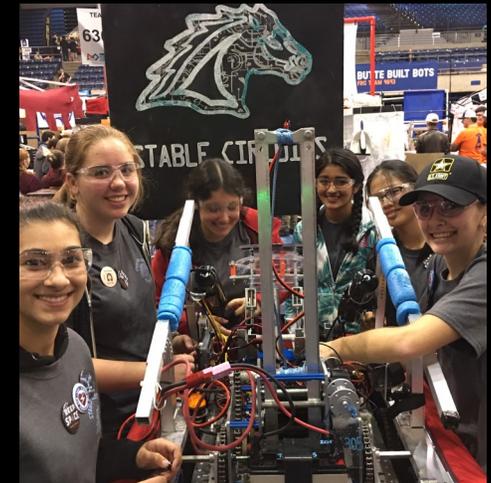
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Career Technical Education

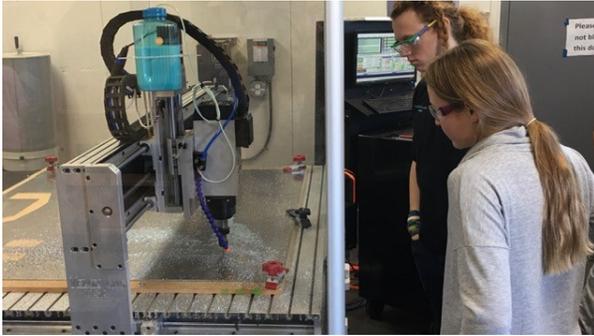
Manufacturing and Product Development

Product Innovation and Design Pathway



Clovis North High School
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Fresno, Ca 93730

Tel: 559-327-5000



Career Options

The Product Innovation and Design pathway provides students with an understanding of the design and manufacturing technologies common to careers in the fields of product design and manufacturing. Representative topics include the product design and development process, the principles of design, computer-aided design, fabrication and manufacturing processes, sustainability, and the principles of business, entrepreneurship, and global design. Students can also learn computer-aided manufacturing.

Sample occupations associated with this pathway:

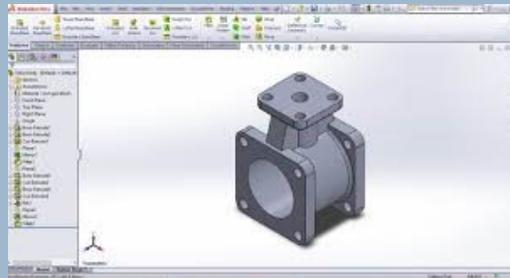
- **Commercial/Industrial**
- **Designer**
- **CAD Designer**
- **Model Maker**
- **Product Developer**
- **Product Manager**



2021-2022 Courses

Computer-Aided Design and Engineering (Concentrator course, Grades 9-11)

Computer Aided Design and Engineering is a year-long course using 3D modeling software that takes students through hands-on projects that create a work product ready to be manufactured or engineered. Students learn the functions of the Solid-Works software program to render 3D models of components to be manufactured. Students then take their renderings and create the actual products using the Velox CNC Router, lathes, 3D printers and other manufacturing tools.

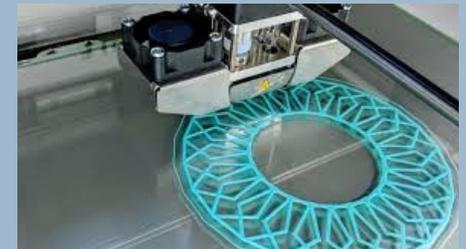


Innovation and Product Design (Capstone course, Grade 12)

Innovation and Product Design is a capstone, laboratory-based class. Students will practice in class what fabricators, engineers, and manufacturers of products really do; observing, questioning, experimenting with designs, and drawing conclusions.

Questioning and thinking logically and critically are emphasized. Using the elements and principles of design as they relate to real world engineering projects is central to the course as is the use of these principles of design to not only consider the form of an object but it's function as well. Our students will discuss and collaborate through the engineering and design of the form and function of solutions to problems.

Learning content (facts) is important, but helping students to think like a fabricator, engineer and manufacturer (critically, logically, using justifications for arguments) is the focus of this course.



This unique pathway affords students the opportunity to create a product and follow it from the design phase all the way through the manufacturing and production phase.

