Welcome to Project Lead the Way at WSHS

Introduction to Engineering Design (IED)

Digital Electronics (DE)

Principles of Engineering (POE)

Civil Engineering and Architecture (CEA)

Computer Integrated Manufacturing(CIM)

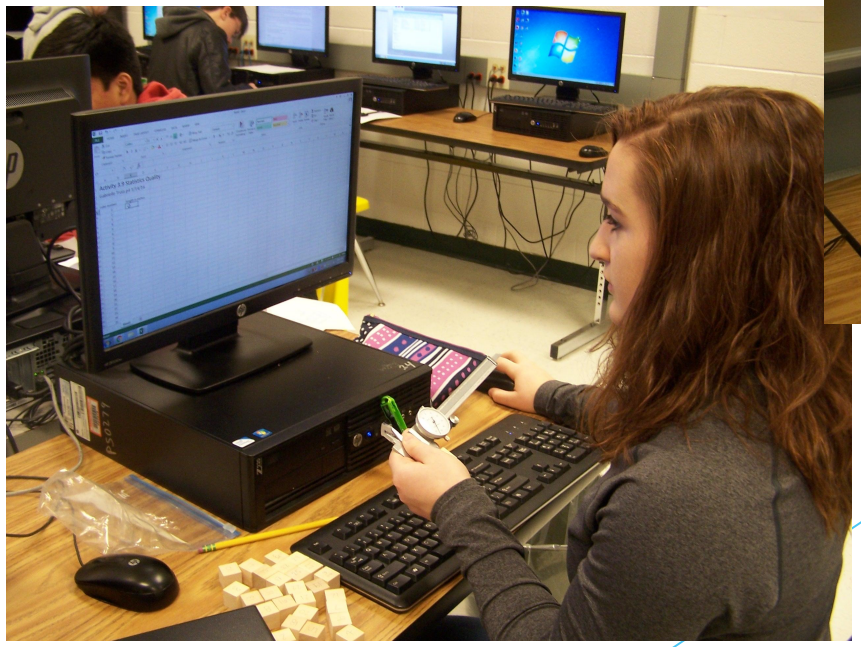
Software Engineering (Computer Science Principles) (SEE)

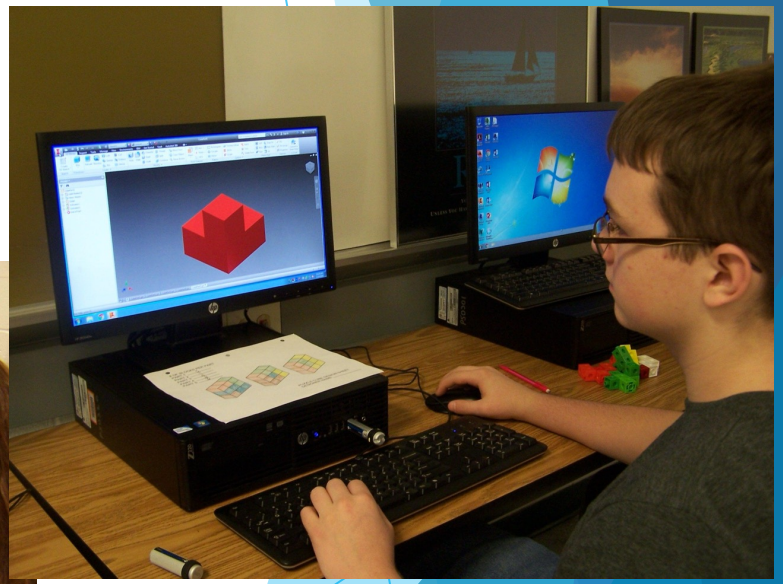
Software Engineering Essentials(SEE)

Engineering Design and Development (EDD)

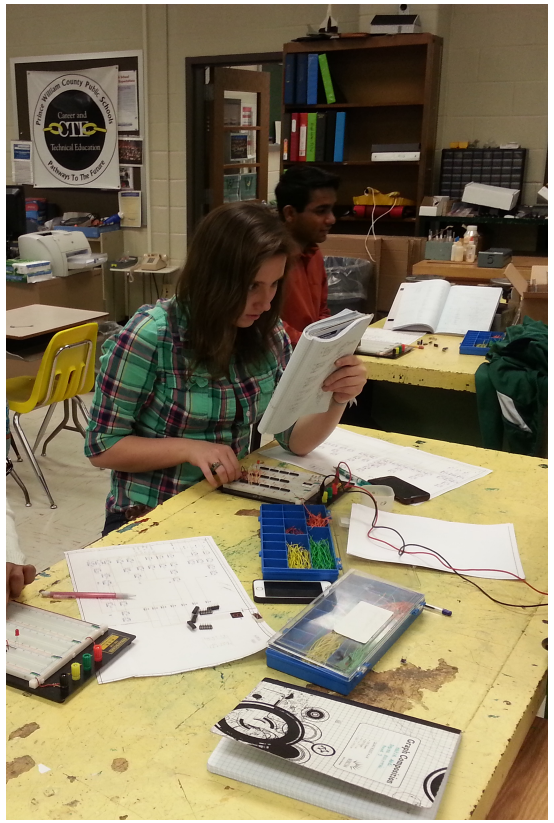
Introduction to Engineering Design (IED)

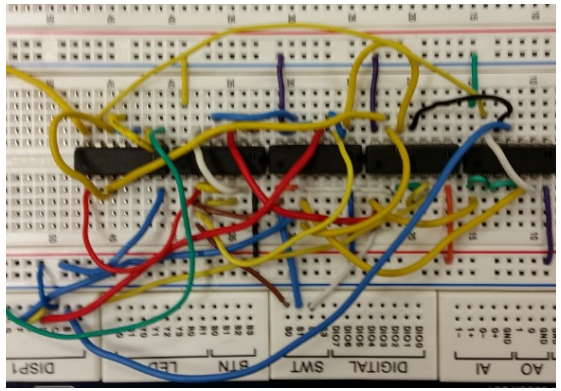
- Engineering design process applying math, science, and engineering standards to hands-on projects.
- Work individually and in teams to design solutions to a variety of problems
- Use Autodesk Inventor and an engineering notebook.

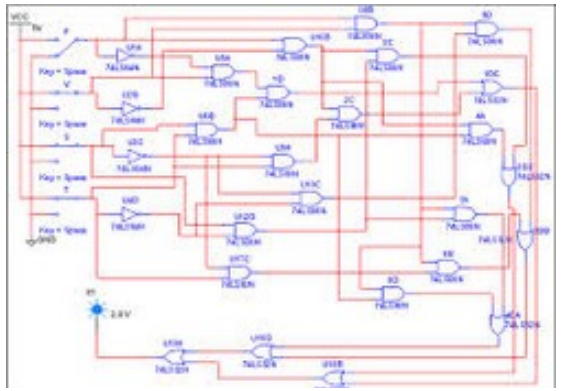




Digital Electronics (DE)



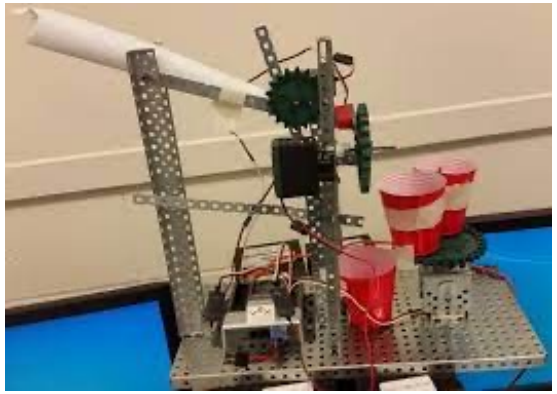


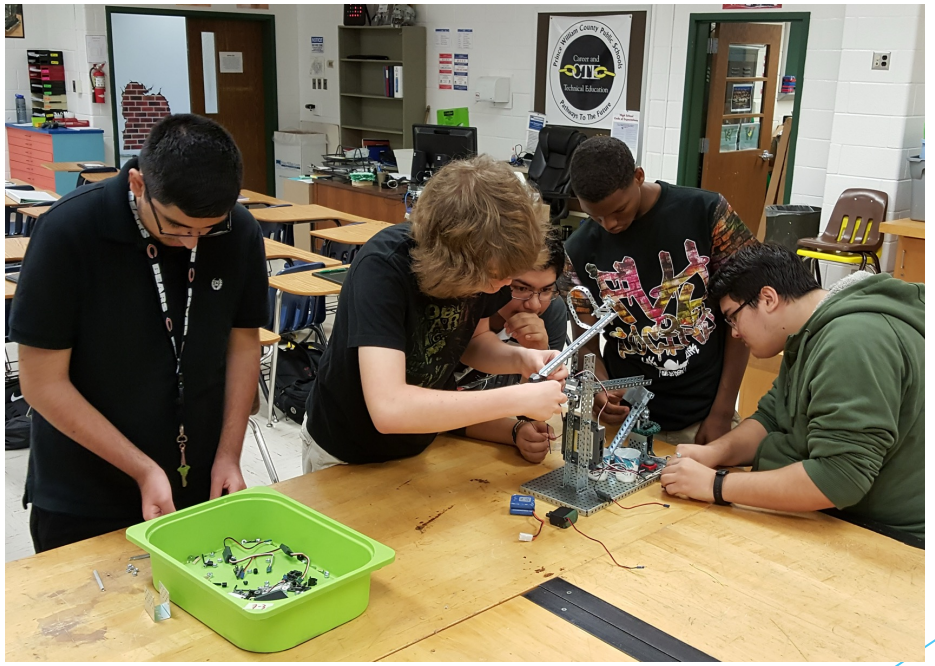


- Basic principles of electrical engineering, electronics, and circuit design.
- Topics include combinational and sequential logic.
- Use circuit design tools including logic gates, integrated circuits, and programmable logic devices.

Principles of Engineering (POE)

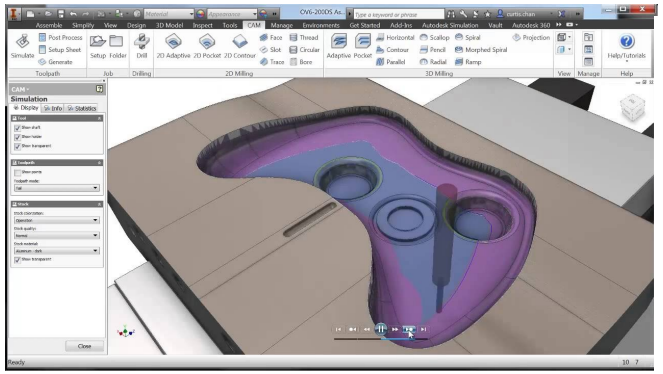
- Explore a broad range of engineering topics including mechanisms, the strength of structures and materials, and automation
- Develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

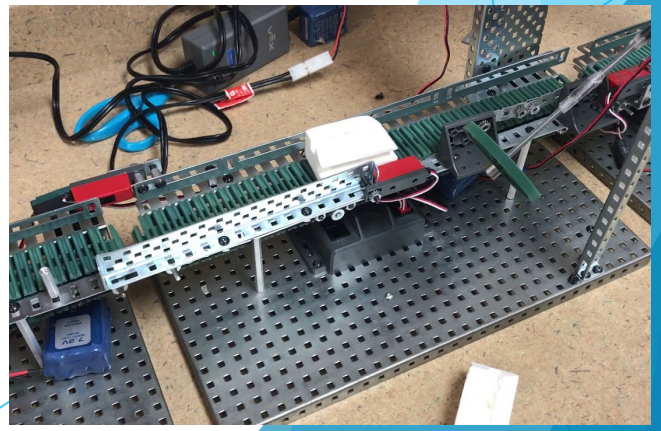




Computer Integrated Manufacturing(CIM)

- This course illuminates the opportunities related to understanding manufacturing.
- The use of 3D design software, 3D printers, laser engravers, CNC machines, and robotic systems let students design physical prototypes of their solutions
- Teaches students about manufacturing processes, product design, robotics, and automation.



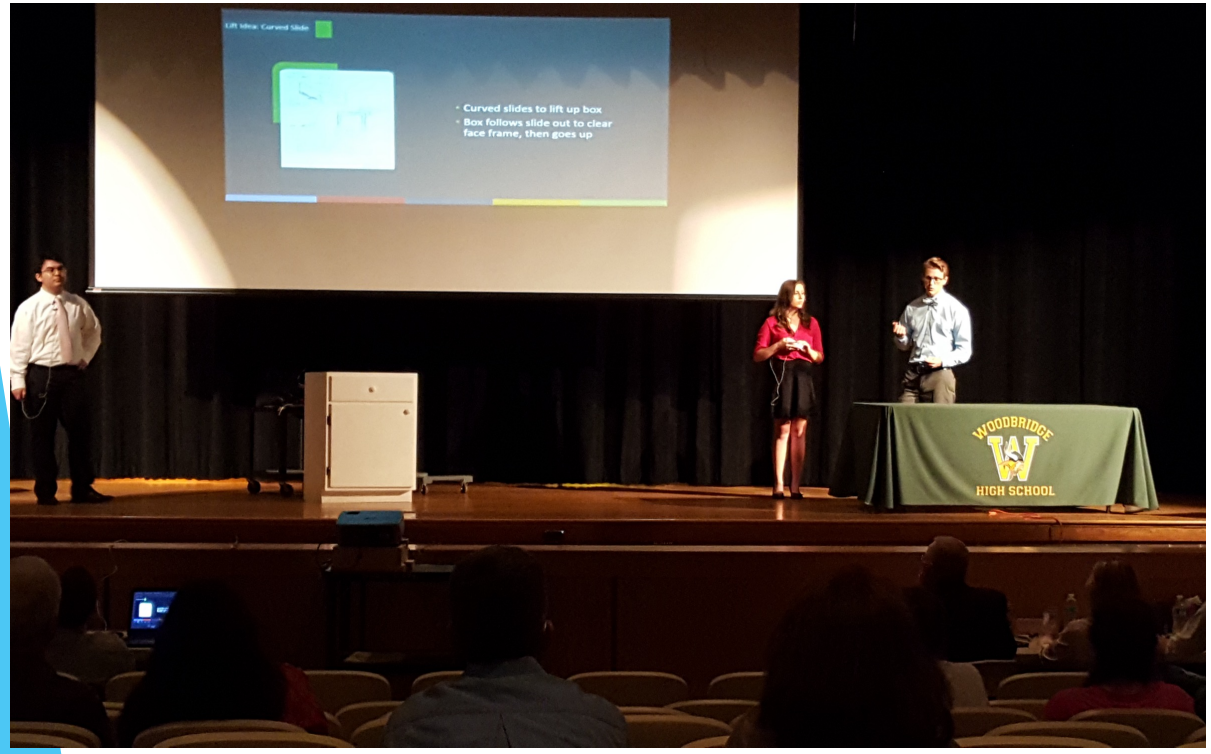


Civil Engineering and Architecture (CEA)

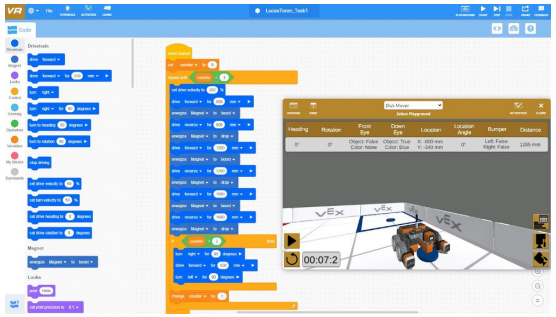
- Learn the important aspects of building and site design and development
- Design residential and commercial projects
- Document work using Autodesk Revit software

Capstone: Engineering Design and Development for PLTW and APS

- Capstone course utilizing all knowledge and skills acquired throughout PLTW Engineering.
- Identify a problem and then research, design, test, and present to a panel of engineers.



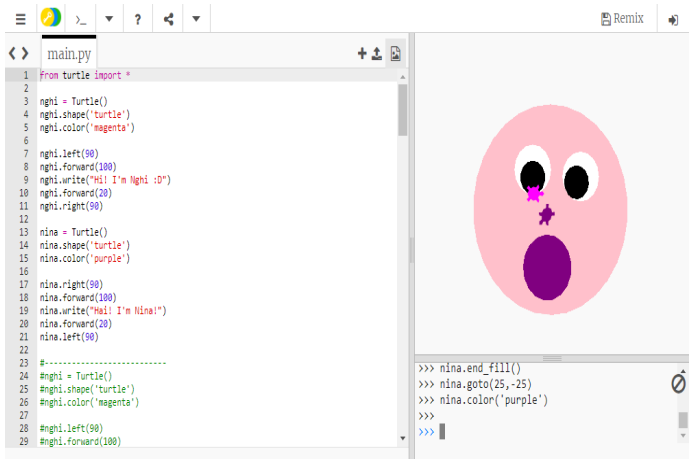
Software Engineering Essentials

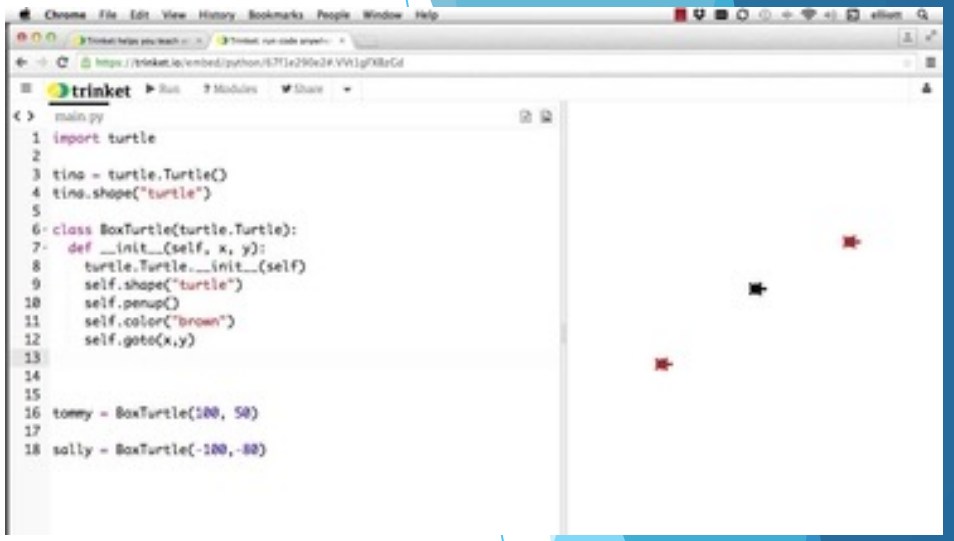


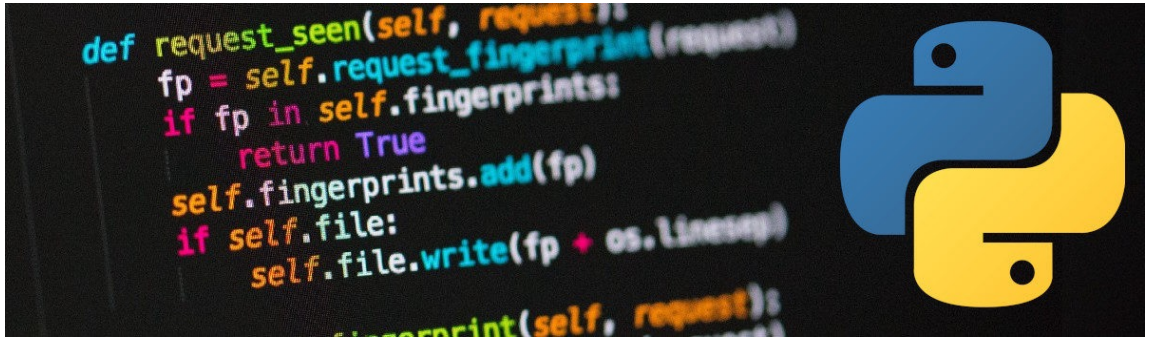
- Learn fundamentals of all coding languages
- Geared for students with little to no prior experience
- Projects include: app development, visualization of data, program “self-driving” vehicle, virtual robotics

Software Engineering (AP Computer Science Principles)

- Develop programming expertise
- Explore the workings of the Internet
- Projects include: Python immersion, visualization of data, cybersecurity, and simulation







PLTW Engineering Track
All Course Weighted (5.0)

- 9th Grade : Introduction to Engineering Design
- 10th Grade : Digital Electronics
- 11th Grade : Principles of Engineering
- 11th Grade : Computer Integrated Manufacturing
- 12th Grade : Civil Engineering and Architecture
- 12th Grade : Engineering Design and Development (Capstone)

PLTW Computer Science Track

+ = Course Weighted (5.0)

- 9th Grade : +Computer Science Essentials
- 10th Grade : +Computer Science Principles
- 11th Grade : +Computer Science A (Proposed 2025)
- 12th Grade : Cybersecurity (Proposed 2025)