- There are many types of Engineers: Aerospace, Agricultural, Computer, Mining, Nuclear, Safety, Civil, Biomedical, Electrical and Electronics, Energy, Environmental, Fuel Cell, Industrial, Manufacturing, Materials, Mechanical, Mining, Petroleum, Photonics, Renewable Energy, Robotics, Validation and Wind Energy and more. One thing all engineers have in common is, they are all creative problem solvers and work success requires them to accurately document their processes and share results. In addition, most engineers have excellent math, science, physics, and computing skills as well and need to be good communicators.

- Job outlook for engineers varies by industry and many engineers complete a Masters Degree.

- In Idaho, the Idaho Board of Professional Engineering and Professional Land Surveyors oversee licensing.

STUDENTS WIN NATIONALS, TWICE!

West Ada's Pre-Engineering/TSA students, in year 2013 and again in 2014, led the nation in technical architectural expertise, design aesthetics, hustle, leadership skills and team work. Each team was made up of students from zoned-home high schools throughout the District in the Pre-Engineering pathway. The dedicated students and their Advisors, worked endless hours to prepare for the Technical Skills Association (TSA) Architectural Renovation Competition. The event included both a panel interview by industry experts as well as, a redesigned home model. The 2014 winning model is pictured below.

Career
&
Technical
Education

Engineering Pathway:

Pre-Engineering

West Ada School District — CTE — Career & Technical Education

Overview

Pre-Engineering training is offered at the CTE Center—Renaissance Campus. This CTE pathway is a **Project Lead The Way** nationally certified program that is designed to prepare students to be innovative and productive leaders in science, technology, engineering and mathematics. Students create, design and problem solve in computer classrooms using state-of-art software and equipment.

Certifications

The Pre-Engineering Pathway, offers opportunities to earn concurrent credit(s) as well as several Auto Desk User Certification (Inventor, Revit AutoCAD) and options to pursue SkillStack badges that potentially "stack up" equal Technical Competency Credits. More information about this option is presented to students through their engineering instructors.

Learn more about ...
CTE Magnet Programs at:
www.westada.org/CTE

CTE Administrative Office - 208.350.5051

Course Offerings

Home High School Classes:

- 9th Grade—**Intro to Engineering Design/Architectural Drafting**

- 10th Grade—**Principles of Engineering—** concurrent credit offered

CTE Center—Renaissance Campus Classes:

Computer Integrated Manufacturing (CIM) (semester class) **-** must be concurrently enrolled in Math II or higher. Students use computer modeling, Computer Numeric Control (CNC) equipment, Computer Aided Manufacturing (CAM) software, robotics and flexible manufacturing systems to discover manufacturing design and processes.

Digital Electronics (DE) (semester class) - this course focuses on electronic circuits which is the foundation of all modern electronic devices e.g. laptops, cell phones, high-definition TVs.

Civil Engineering and Architecture— Students work in teams and learn 3D design software skills by developing property sites and trouble shooting solutions. Students must document their project work and present them to industry professionals. Communication and problem solving are key skills practiced through project-based assignments.

In 2014-15 West Ada's Pre-Engineering Pathway received an Exemplary Program Award from the Idaho Division of CTE! The prestigious award honors Idaho's best high school CTE programs.

Aerospace Engineering—Students use 3D design software to design intelligent vehicles which engage them in engineering design challenges related to the evolution and physics of flight, flight simulation, rocketry, space travel and physiology, as well as related structures and materials, remote sensing and robotics. Students must demonstrate and document their projects.

Engineering Design & Development— In senior-level capstone class is highly recommend. Students work in groups to research, design, build and then test a new engineering design or, one that improves an existing design. The group projects are shared at an annual community event open to the public. Local engineers are invited to provide constructive feedback and mentorship.