The Academy for Engineering and Design Technology
Why Students Choose AEDT as a First Choice?

- Students are drawn to the Engineering Academy because they like to create, build, or reverse-engineer things.

- Students have the opportunity to do this in state-of-the-art classrooms and laboratories.

- Projects include product development, civil or architectural designs, robotic and design competitions, and much more.
AEDT: FOCUS

- AEDT focuses on general engineering disciplines and prepares students for successful entrance into college engineering programs.

- While not everyone in this academy will pursue engineering, those that choose to do so will have a solid background in the field and are likely to master college engineering programs.

- Students are also prepared to pursue careers in the technical aspects of business, law and other fields.

- Articulation agreements with universities enable AEDT students to receive college credit for some of their coursework.
Engineering Curriculum

- AEDT curriculum is rooted in the Project Lead the Way H.S. Engineering sequence. More information can be found at: [www.pltw.org](http://www.pltw.org)

- All Engineering courses involve a lab component starting in the freshman year. Lab projects are interdisciplinary or "Product Based".

- Engineering courses and projects are supplemented by competitions whenever possible. Competition projects usually include external timelines, curriculum, judging and field trips.
Basic Lab Technologies

- Computer Labs include the latest in computer hardware and software for engineering research and design.

- The Prototyping Lab includes a complete assortment of hand and power tools for the construction of prototype designs.

- The Fabrication Shop includes machine tools for basic wood and metal work including a manual Mini Mill, Lathe, Drill combo machine.
Advanced Lab Technologies

- 3D Printer: Takes a 3D CAD file and makes a hard plastic prototype.


- Laser Cutting/Engraving: Capable of cutting and engraving plastic and wood profile parts.

- Laser Scanning: Captures 3D data for printing, reverse-engineering, innovations or animation.
Class Projects and Activities

3D Art – The Dimension Extreme Redesign Competition
Reverse Engineering Project: A mechanical device is selected from home such as an old power drill or a music box. Students spend a predetermined amount of time researching the product, recreating it using measuring instruments and 3D drafting software and then documenting the process and results with a presentation.
Students participating in the West Point Bridge Building Contest toured the George Washington Bridge—from the anchorage to the top of the New Jersey Tower!

Engineering Competitions: West Point Bridge Building
Class Projects and Activities -- Continued

Invention Projects: Students use the invention process to research, design and create a device that solves a problem, or fulfills a need or the goals of a competition. The invention project provides a connection to the students’ prior learning not just from previous engineering classes, but from other academic subjects such as math, physics and chemistry. Our most popular Invention/Competition project is BattleBots.
A Head-Tilt controlled wheelchair system developed by Brigid Blakeslee AEDT 2009!

Engineering Research: Adaptive/Assistive Technologies
Students participating in the Team America Rocketry Challenge met Russian Cosmonaut Maxim Suraev!

Engineering Research: Team America Rocketry Challenge
What we want to see in a prospective AEDT student?

- Students must have a strong desire to solve problems using math, science and technology.

- Students must like to work with their hands and apply creativity to engineering assignments and projects.

- Students should have good organizational skills such as maintaining computer files, keeping project journals and building portfolios.

- Great communication skills are always a plus!
Join a Winning Team!
Visit our Academy at:
http://www.bergen.org/AEDT

Visit our Engineering Sports Team “The Titanium Knights” at:
http://sites.bergen.org/battlebots