

# Career and Technical Education: Technology and Engineering

The goal of the Technology and Engineering curriculum is to successfully apply real-world skills by utilizing the latest technological trends and applications. Students have the opportunity to apply their knowledge to project work and advanced hands-on activities.

Arrowhead offers the nationally accredited Project Lead the Way Program ([pltw.org](http://pltw.org)) that includes six courses. Students may elect to receive college credit ([link](#)) with Project Lead the Way affiliated universities if they successfully demonstrate proficiency on the end of course assessment. Arrowhead has become an accredited school through the National Automotive Technicians Education Foundation (NATEF) as well as the Automotive Youth Education Systems (AYES). Both associations provide graduates job opportunities, scholarships, free tools, and advanced placement at WCTC and MATC.

The Technology and Engineering curriculum has been designed to nurture a greater understanding of engineering principles and problem solving strategies while also allowing students to develop manufacturing skills and techniques. Students are encouraged to explore offerings in manufacturing, engineering and automotive.

Technology and Engineering course fees cover all class consumables (paper, toner, pencils, markers, etc.) All **EXTRA** materials, including materials for projects that the students take home, need to be purchased by the student during the course. This includes materials like lumber, plastic, and metal. (Pricing lists are posted in each lab.)

Two credits of Career and Technical courses are required for graduation. This can be met by taking courses in the Business and Marketing, Technology and Engineering Education, and Family and Consumer Education.

**Jeremy Schlitt and Anthony Christian, Teacher Leaders, 369-3612, Ext. 3258**

9 <sup>th</sup> Grade	<ul style="list-style-type: none"> <li>● Introduction to Engineering and Manufacturing (PLTW) 1 &amp; 2</li> <li>● Introduction to Engineering and Manufacturing (PLTW) 1 &amp; 2 - Female Only</li> </ul>		
<i>Manufacturing and Engineering Courses</i>			
10 <sup>th</sup> Grade	<ul style="list-style-type: none"> <li>● Manufacturing and Engineering with Materials 1 &amp; 2</li> <li>● Manufacturing and Engineering with Materials 1 &amp; 2 - Female Only</li> <li>● Introduction to Engineering and Manufacturing (PLTW) 1 &amp; 2 Female Only</li> <li>● Engineering and Mechanics (PLTW) 1 &amp; 2** (Principles of Engineering AND Physics/ AP Physics)</li> <li>● Civil Engineering and Architecture (PLTW) 1 &amp; 2</li> </ul>		
11 <sup>th</sup> and 12 <sup>th</sup> Grade	<i>Manufacturing Courses</i>	<i>Engineering Courses (PLTW)</i>	<i>Automotive Courses</i>
	<ul style="list-style-type: none"> <li>● Metals Fabrication I</li> <li>● Metals Fabrication II**</li> <li>● Machining I</li> <li>● Woods Production I</li> <li>● Woods Production II**</li> <li>● Cabinetmaking I &amp; 2**</li> <li>● Technology and Engineering Youth Apprenticeship 1 &amp; 2**</li> <li>● Warhawk Manufacturing I &amp; 2 **</li> </ul>	<ul style="list-style-type: none"> <li>● Civil Engineering and Architecture (PLTW) 1 &amp; 2</li> <li>● Engineering and Mechanics (PLTW) 1 &amp; 2** (Principles of Engineering AND Physics/ AP Physics)</li> <li>● Systems and Controls (PLTW) 1 &amp; 2** (Physics of Electronics AND Computer Integrated Manufacturing)</li> <li>● Engineering Design and Development (PLTW) 1 &amp; 2**</li> <li>● Technology and Engineering Youth Apprenticeship 1 &amp; 2**</li> </ul>	<ul style="list-style-type: none"> <li>● Consumer Auto</li> <li>● Consumer Auto-Female Only</li> <li>● Automotive Technology I</li> <li>● Automotive Technology II*</li> <li>● Advanced Automotive Technology 1 &amp; 2**</li> <li>● Technology and Engineering Youth Apprenticeship 1 &amp; 2**</li> </ul>
(**Indicates prerequisites, see course descriptions)			