



# Production

**Career Goal (O\*NET Code):** Precision Metal Production (51-4041), Welder (51-4121), Machine Operator (51-4081), Inspector (51-9061).

**Cluster Overview:** Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

## SUGGESTED COURSEWORK

## EXTENDED LEARNING EXPERIENCES

<b>High School</b>	9th	<b>Core Courses:</b>	English I Algebra I Biology	World Geography Languages other than English I Health/PE or Equivalent	<b>Curricular Experiences:</b> SkillsUSA TSA BEST Robotics, Inc FIRST High School Robotics Competition  <b>Career Learning Experiences:</b> Career Preparation (Paid/Unpaid) Job Shadowing Internship Apprenticeship	<b>Extracurricular Experiences:</b> National Engineering Design Competition Odyssey of the Mind  <b>Service Learning Experiences:</b> Boy Scouts of America Girl Scouts of the USA Habitat for Humanity Community Service Volunteer
		<b>Career-Related Electives:</b>	Technology Systems (Modular Lab Based)** or Introduction to Precision Metal Manufacturing or Machine Shop or Welding			
	10th	<b>Core Courses:</b>	English II Geometry Principles of Technology I	World History Languages other than English II Technology Applications		
		<b>Career-Related Electives:</b>	Engineering Principles or Engineering Graphics or Electricity/Electronics Technology or Metal Trades			
	11th	<b>Core Courses:</b>	English III Mathematical Models with Applications Physics	United States History Communication Applications PE or Equivalent		
<b>Career-Related Electives:</b>		Bio-related Technology Systems or Energy, Power, and Transportation Systems or Manufacturing Systems				
12th	<b>Core Courses:</b>	English IV Algebra II Engineering	Government/Economics Fine Arts			
	<b>Career-Related Electives:</b>	Research Design and Development or Problems and Solutions in Technology or Manufacturing Technology				
<b>Postsecondary</b>	On-the-Job Training	Machinist Assistant Shop Helper	Drafting/CADD Assistant Production Associate	<b>Professional Associations:</b> American Iron & Steel Institute American Machine Tool Distributors Association American Society for Nondestructive Testing American Society for Testing and Materials American Welding Society Composites Fabricators Association National Association of Manufacturers National Tooling & Machining Association Precision Metalforming Association Society of Plastics Engineers		
	Certificates	Welder/Welding Precision Metal Workers OSHA CareerSafe	Drafting Machine Operator			
	Associate's Degree	Mechanical Engineering-Related Technologies Industrial Equipment Maintenance and Repairers	Welder Industrial Production			
	Bachelor's Degree	Technology Management Design Technology	Industrial Technology			
	Graduate Degree	Engineering Technology Design Technology	Industrial Safety			

\* May substitute for the required credit for Physical Education  
 \*\* Satisfies the required credit for Technology Applications  
 \*\*\* May substitute for the required credit for Health Education

Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated courses, if possible.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2007. All plans should meet high school graduation requirements as well as college entrance requirements. Students may select other elective courses for personal enrichment purposes.