



# Maintenance, Installation, and Repair

**Career Goal (O\*NET Code):** Maintenance Repairer (49-9042), Industrial Electronic Installer (49-2094), Electrician (47-2111), BioMedical Equipment Technician (49-9062).

**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

High School		9th		Curricular Experiences: SkillsUSA TSA	Extracurricular Experiences: Science Olympiad
		Core Courses:	World Geography Languages other than English I Health/PE or Equivalent		
Postsecondary	9th	Career-Related Electives:	Technology Systems (Modular Lab Based)** or Electrical Trades or Industrial Electronics or Machine Shop		
		Core Courses:	English II Geometry Principles of Technology I	World History Languages other than English II Technology Applications	
	10th	Career-Related Electives:	Engineering Graphics or Engineering Principles or Electronics Technology or Construction Systems		
		Core Courses:	English III Mathematical Models with Applications Physics	United States History Communication Applications PE or Equivalent	
	11th	Career-Related Electives:	Energy, Power, and Transportation Systems or Power Technology or Manufacturing Systems or Introduction to Robotics		
		Core Courses:	English IV Algebra II Engineering	Government/Economics Fine Arts	
	12th	Career-Related Electives:	Research Design and Development or Problems and Solutions in Technology or Manufacturing Technology		
		Core Courses:	English I Algebra I Biology	World Geography Languages other than English I Health/PE or Equivalent	
Postsecondary	On-the-Job Training	Maintenance Assistant	Shop Helper	Drafting Assistant	Professional Associations: American Electroplaters and Surface Finishers Society American Iron and Steel Institute American Machine Tool Distributors Association American Welding Society Composites Fabricators Association Industrial Fasteners Institute National Association of Manufacturers National Tooling and Machining Association Precision Metalforming Association Robotic Industries Association Society for Maintenance and Reliability Professionals
	Certificates	Welder/Welding OSHA CareerSafe	Drafting		
	Associate's Degree	Welder Industrial Production	Mechanical Engineering-Related Technologies Industrial Equipment Maintenance and Repairers		
	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.