

HIGH SCHOOL PLANNER MANUFACTURING

This information should serve as a guide, along with other career planning materials, as you continue your career path. Courses listed within this guide are only recommended coursework and should be individualized to meet each learner's education and career goals. All plans should meet high school graduation requirements as well as college entrance requirements.

HIGH SCHOOL	9th	10th	11th	12th
	Core Requirements		Core Requirements	
	English 9 Secondary Math 1 Science World Geography		English 10 Secondary Math 2 Science World Civilizations	
			English 11 Secondary Math 3 (PreCalculus) Science U.S. History	
			English 12 Calculus or Statistics American Gov. & Citizenship	
	Required Electives			
PE, The Arts, CTE, Computer Tech., Health, Financial Literacy				
Career Electives (Choose Three Credits)				
	9th	10th	11th	12th
	Exploring Technology I, II Manufacturing Technology Communication Technology, Intro. to Engineering, Principals of Engineering, Construction Technology, Design Technology	Computer Upgrade & Repair A+ Electronics I, II, design Technology, Intro to Engineering, Principals of Engineering, Home Building (Carpentry, Electrical, Plumbing)	Auto Mechanics, Design Technology, Computer Upgrade & Repair A+, Occupational Welding, Advanced Technology Education, Metal Work, Machine Shop, Machinist Technician, Welding, Home Building Program (Carpentry, Electrical, Plumbing) Fashion Design	
Career Enhancement Options	GTI	STATE CTE CAREER PATHWAYS		Work Based Learning CTSO Participation
	Intro to Engineering, Principles of Engineering, Digital Electronics, Biotechnology, Computer Programming, Intro to Information Technology, Engineering Design & Development, Computer Integrated Manufacturing, Biomanufacturing, Computer Maintenance A+	The state Skilled & Technical Education Pathway offers the following study guides for consideration: Cabinetmaking/Millwork, Design Technology, Machine Tool, Welding and Carpentry. The State Technology & Engineering Pathway has these study guides: Pre-Engineering, Project Lead the Way National Pre-Engineering Program. For more information see: http://www.schools.utah.gov/CTE/main/CTE-Programs.aspx		Ask your Career Center Coordinator about Job Shadowing Internships Career Seminars You are strongly advised to participate in a Career and Technical Student Organization. The CTSOs associated with this cluster are Skills USA and TSA It depends on your pathway for which one chosen.
Post Secondary	SLCC School of Applied Tech		Tech Training/ AS Degree	
	Welding (Introduction, Stick Welding, Arc Welding, Flux Core Welding, Oxy-Acetylene Welding, Tungsten Arc Welding), Machinist. See www.slcc.edu/sat		Engineering Technology - Manufacturing Technology, Mechanical Engineering Technology, Pre Engineering, Engine and Machine Assembler, Warehouse foreman, Lab Technician, Computer Maintenance Technician. For information see: www.slcc.edu	
	College/University			Mechanical Engineering, Bio-Engineering, Aerospace Engineering, Manufacturing Lab Technician, Industrial Packaging Engineer, Patent Attorney, Environmental Engineer, Air Quality Analyst, Clothing Designer, Warehouse Supervisor For information about schools offering specific programs see UtahFutures



Manufacturing Cluster

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.

Sample Career Specialties/Occupations	<ul style="list-style-type: none"> ◆ Assemblers ◆ Automated Manufacturing Technicians ◆ Bookbinders ◆ Calibration Technicians ◆ Electrical Installers and Repairers ◆ Electromechanical Equipment Assemblers ◆ Extruding and Drawing Machine Setters/Set-Up Operators ◆ Extrusion Machine Operators ◆ Foundry Workers ◆ Grinding, Lapping, and Buffing Machine Operators ◆ Hand Packers and Packers ◆ Hoist and Winch Operators ◆ Instrument Makers ◆ Large Printing Press Machine Setters and Set-Up Operators ◆ Machine Operators ◆ Managers, Supervisors ◆ Medical Appliance Makers ◆ Milling Machine Setters, Set-Up Operators ◆ Millwrights ◆ Operators, Tenders, Cutters/Brazers, Soldering, Machine Operations ◆ Painters ◆ Pattern & Model Makers ◆ Precision Layout Workers ◆ Precision Optical Goods Workers ◆ Production Associates ◆ Sheet Metal Workers ◆ Solderers and Braziers ◆ Tool and Die Makers ◆ Welders 	<ul style="list-style-type: none"> ◆ Design Engineers ◆ Electrical and Electronic Technicians and Technologists ◆ Electronics Engineers ◆ Engineering and Related Technicians and Technologists ◆ Engineering Technicians ◆ Industrial Engineers ◆ Labor Relations Managers ◆ Manufacturing Engineers ◆ Manufacturing Technicians ◆ Power Generating and Reactor Plant Operators ◆ Precision Inspectors, Testers, and Graders ◆ Process Improvement Technicians ◆ Production Managers ◆ Purchasing Agents ◆ Supervisors 	<ul style="list-style-type: none"> ◆ Biomedical Equipment Technicians ◆ Boilmakers ◆ Communication System Installers/Repairers ◆ Computer Installers/Repairers ◆ Computer Maintenance Technicians ◆ Electrical Equipment Installers/Repairers ◆ Facility Electricians ◆ Industrial Electronic Installers/Repairers ◆ Industrial Facilities Managers ◆ Industrial Machinery Mechanics ◆ Industrial Maintenance Electricians ◆ Industrial Maintenance Mechanics ◆ Industrial Maintenance Technicians ◆ Instrument Calibration and Repairers ◆ Instrument Control Technicians ◆ Job/Fixture Designers ◆ Laser Systems Technicians ◆ Maintenance Repairers ◆ Major Appliance Repairers ◆ Meter Installers/Repairers ◆ Millwrights ◆ Plumbers, Pipe Fitters and Steam Fitters ◆ Security System Installers/Repairers 	<ul style="list-style-type: none"> ◆ Calibration Technicians ◆ Inspectors ◆ Lab Technicians ◆ Process Control Technicians ◆ Quality Control Technicians ◆ Quality Engineers ◆ SPC Coordinators 	<ul style="list-style-type: none"> ◆ Communications, Transportation and Utilities Managers ◆ Dispatchers ◆ Freight, Stock, and Material Movers ◆ Industrial Truck and Tractor Operators ◆ Logistical Engineers ◆ Logisticians ◆ Material Associates ◆ Material Handlers ◆ Material Movers ◆ Process Improvement Technicians ◆ Quality Control Technicians ◆ Traffic Managers ◆ Traffic, Shipping, and Receiving Clerks 	<ul style="list-style-type: none"> ◆ Environmental Engineers ◆ Environmental Specialists ◆ Health and Safety Representatives ◆ Safety Coordinators ◆ Safety Engineers ◆ Safety Team Leaders ◆ Safety Technicians
Path ways	Production	Manufacturing Production Process Development	Maintenance, Installation & Repair	Quality Assurance	Logistics & Inventory Control	Health, Safety and Environmental Assurance
Cluster K & S	<p>Cluster Knowledge and Skills</p> <ul style="list-style-type: none"> ◆ Academic Foundations ◆ Communications ◆ Problem Solving and Critical Thinking ◆ Information Technology Applications ◆ Systems ◆ Safety, Health and Environmental ◆ Leadership and Teamwork ◆ Ethics and Legal Responsibilities ◆ Employability and Career Development ◆ Technical Skills 					