

Career Pathway Plan of Study: Manufacturing

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.

GRADE 9-12 SCOPE AND SEQUENCE PROGRESSION OF LEARNING

TIER 1		TIER 2		TIER 3	
Careers that you can enter with a high school diploma and relevant coursework.		Careers that require some formal training or education beyond high school. Examples would include community college, trade school, technical school, etc.		Careers that frequently require a four-year degree or more.	
Examples of Tier 1 Careers: Apprenticeship, Electrical and Electronic Equipment Assembler, Electromechanical Equipment Assembler, Machinist, Maintenance Worker (Machinery)		Examples of Tier 2 Careers: Apprenticeship, Bench Carpenter, Cabinetmaker, Clerk (Production/Planning/Expediting), CNC Operator, Cutter, Electrical and Electronics Engineering Technician, Industrial Engineering Technician, Industrial Machinery Mechanic, Inspector, Machinist, Maintenance and Repair Worker, Mechanical Drafter, Power Plant Operator, Production Supervisor, Team Assembler, Tool/Die Maker, Welder		Examples of Tier 3 Careers: Chemical Technician, CNC Engineer, Industrial Production Manager, Mechanical Facility Management, Purchasing Agent, Systems Engineer	
*For complete job descriptions and requirements, please visit O*NET Online (U.S. Department of Labor)					
TIER 1 FOUR-YEAR PLAN		TIER 2 FOUR-YEAR PLAN		TIER 3 FOUR-YEAR PLAN	
9 th Grade Core Classes	10 th Grade Core Classes	9 th Grade Core Classes	10 th Grade Core Classes	9 th Grade Core Classes	10 th Grade Core Classes
English 1	English 2	English 1	English 2	English 1	English 2
Freshman Writing	Math	Freshman Writing	Math	Freshman Writing	Math
Math	Biology	Math	Biology	Math	Biology
Physical Science	Civics (1/2 credit)	Physical Science	Civics (1/2 credit)	Physical Science	Civics (1/2 credit)
World Studies	Economics (1/2 credit)	World Studies	Economics (1/2 credit)	World Studies	Economics (1/2 credit)
Sport Education (1/2 credit)	Fit for Life or Personal Fitness (1/2 credit)	Sport Education (1/2 credit)	Fit for Life or Personal Fitness (1/2 credit)	Sport Education (1/2 credit)	Fit for Life or Personal Fitness (1/2 credit)
Art or ICT (½ credit)	Health 1 (1/2 credit)	Art or ICT (½ credit)	Health 1 (1/2 credit)	Art or ICT (½ credit)	Health 1 (1/2 credit)
	Art or ICT (½ credit)		Art or ICT (½ credit)	World Language	Art or ICT (½ credit)
					World Language
11 th Grade Core Classes	12 th Grade Core Classes	11 th Grade Core Classes	12 th Grade Core Classes	11 th Grade Core Classes	12 th Grade Core Classes
English 3	English 4 (or English Elective)	English 3	English 4 (or English Elective)	English 3	English 4 (or English Elective)
Math	Math Experience	Math	Math	Math	Math
US History		US History	Physics or Chemistry	US History	World Language
		Physics or Chemistry		World Language	Physics or Chemistry
				Physics or Chemistry	
TIER 1 CAREER PATHWAY PLAN OF STUDY ELECTIVES		TIER 2 CAREER PATHWAY PLAN OF STUDY ELECTIVES		TIER 3 CAREER PATHWAY PLAN OF STUDY ELECTIVES	

<p>*CADD 1 & 2 (U) (H)</p> <p>*HVACR 1 & 2</p> <p>Electricity/Electronics</p> <p>Marine Robotics</p> <p>Power Mechanics 1 & 2</p> <p>Robotics Using Vex (U) (H)</p> <p>*Advanced Manufacturing 1 & 2 (U) (H)</p> <p><u>*Engineering Pathways</u></p> <p>-Introduction to Engineering Design</p> <p>-Principles of Engineering (U) (H)</p> <p>-Computer Integrated Manufacturing (U) (H)</p> <p>-Engineering Design & Development</p>	<p>*CADD 1 & 2 (U) (H)</p> <p>*HVACR 1 & 2</p> <p>Electricity/Electronics</p> <p>*Construction Technology 1 & 2</p> <p>Marine Robotics</p> <p>Power Mechanics 1 & 2</p> <p>Robotics Using Vex (U) (H)</p> <p>*Advanced Manufacturing 1 & 2 (U) (H)</p> <p><u>*Engineering Pathways</u></p> <p>-Introduction to Engineering Design</p> <p>-Principles of Engineering (U) (H)</p> <p>-Computer Integrated Manufacturing (U) (H)</p> <p>-Engineering Design & Development (U) (H)</p>	<p>Advanced Science and Math courses</p> <p>Introduction to Business</p> <p><u>*Engineering Pathways</u></p> <p>-Introduction to Engineering Design</p> <p>-Principles of Engineering (U) (H)</p> <p>-Computer Integrated Manufacturing (U) (H)</p> <p>-Engineering Design & Development (U) (H)</p>
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*=CTE Program with Nashua Technology Center

Levels: U-Unleveled, F-Foundations, E-Extensions, H-Honors