



# Manufacturing Production Process Development Pathway

## Manufacturing Career Cluster



This Program of Study plan should serve as a guide in the development of secondary and post-secondary course planning for students. Courses listed within this plan are only recommended and are indicative of the courses needed to complete a Program of Study. The following items need to be considered:

- Courses in the arts and humanities are valued by post-secondary institutions for their cognitive benefits and in communicating and expressing the ideas and emotions of the human spirit.
- Post-secondary institutions have varying course requirements for admission including World Languages.

High School	Grade	English	Math	Science	Social Studies	Other Required Courses	Pathway Electives Recommended	Credit Review	
	Required Credits	4.0	3.0	3.0	3.0	2.0	Recommended Sequence for Pathway ( <i>may adjust yearly as needed</i> ) [Minimum– 8.5 elective credits needed for graduation]	Grade	Graduation Credit Requirements
	Grade 9	• English 9 (1.0) -OR- • Enriched English 9 (1.0)	• Algebra I (1.0)	• Earth Science (0.5)	• US History (0.5)	• Level I Physical Education (0.5) • Health 9 (0.5)	• Metals/Welding I (1.0) -OR- • Woodworking I (1.0)	• 9-12 • 9-12	4.0 Required 2.0 Elective 6.0 Total
	Grade 10	• English 10 (1.0) -OR- • Enriched English 10 (1.0)	• Geometry (1.0) -OR- • Enriched Geometry (1.0)	• Biology (1.0)	• World Studies (1.0) -OR- • AP European Studies (1.0)	• Level II Physical Education (0.5)	• Welding II (1.0) -OR- • Woodworking II (TC) (1.0)	• 10-12 • 10-12	4.5 Required 1.5 Elective 6.0 Total
	Grade 11	• English 11 (1.0) -OR- • AP Language & Composition (1.0)	• Algebra II/ Trigonometry (1.0) -OR- • Enriched Algebra II/Trigonometry (1.0)	• Physics (1.0)	• Government (0.5) -OR- • AP United States Government and Politics (0.5)	• Level III Physical Education (0.5)	• Introduction to Engineering Design (1.0) • Preparation for College and Business Communications (1.0)	• 9-12 • 11-12	4.0 Required 2.0 Elective 6.0 Total
	Grade 12	• English 12 (1.0) -OR- • AP Literature & Composition (1.0)	• See post-secondary education institution for math requirements.	• See post-secondary education institution for science requirements.	• AP Psychology (1.0) -OR- • Psychology (0.5) -OR- • Sociology/Social Issues (0.5)  • AP Economics (0.5) -OR- • Economics (0.5)	• Computer Integrated Manufacturing (1.0)	• 10-12	2.5 Required 3.0 Elective 5.5 Total	
<b>Course Code Key (see course catalog for further details)</b>		<b>28 Credits Possible</b>			<b>Other Related Courses and Activities (curricular, co-curricular, and extra-curricular)</b>				
AP Advanced Placement AS Advanced Standing TC Transcribed Credit YO Youth Options (0.5) Course is worth 0.5 credit (0.75) Course is worth 0.5 credit (non-TC) or 0.75 credit (TC) (1.0) Course is worth 1.0 credit		<b>Credits</b> Required Grades 9-12 .....15.0 Minimum Electives.....8.5 <b>Credits for Graduation .....23.5</b>			<ul style="list-style-type: none"> <li>• STEM Youth Apprenticeship (1.0/yr)</li> <li>• Architecture &amp; Construction Youth Apprenticeship (1.0/yr)</li> <li>• Principles of Engineering (1.0)</li> <li>• World Languages (0.5)</li> <li>• Microsoft Office Suite (TC) (0.5)</li> </ul>				



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Advisement provided through Student Services office and post-secondary transfer credits determined by college admissions counselors.

Postsecondary credit transfer information also available at <http://www.uwsa.edu/tis>

*Please visit the web site of institutions listed below for any program updates.*

<b>Post-Secondary Options</b>	Baccalaureate Degree		Associate Degree Programs		Certificate/License
	<p><u>University of Wisconsin - Stout</u></p> <ul style="list-style-type: none"> <li>• Manufacturing Engineering</li> <li>• Packaging</li> <li>• Plastics Engineering</li> <li>• Engineering Technology</li> </ul> <p><u>University of Wisconsin - Platteville</u></p> <ul style="list-style-type: none"> <li>• Industrial Engineering</li> <li>• Industrial Technology Management</li> <li>• Manufacturing Technology Management</li> </ul>	<p><u>University of Wisconsin - Madison</u></p> <ul style="list-style-type: none"> <li>• Industrial Engineering</li> </ul> <p><u>University of Minnesota – Twin Cities</u></p> <ul style="list-style-type: none"> <li>• Manufacturing Technology</li> </ul>	<p><u>Chippewa Valley Technical College</u></p> <ul style="list-style-type: none"> <li>• Air Conditioning, Heating, &amp; Refrigeration Technology</li> <li>• Environmental Refrigeration, Air Conditioning, &amp; Heating Service Technician</li> <li>• Industrial Mechanic</li> <li>• Machine Tooling Technics</li> <li>• Welding</li> </ul> <p><u>Madison Area Technical College</u></p> <ul style="list-style-type: none"> <li>• CNC Specialist Certificate</li> <li>• HVAC Certificate</li> <li>• Industrial Maintenance Technician</li> <li>• Industrial Maintenance Technician Certificate</li> <li>• Machine Tool Operations Certificate</li> <li>• Machine Tooling Technics</li> <li>• Welding</li> </ul>		
	Adult Apprenticeship, On-the-Job Training or Other		Employment Options		
		<b>Careers</b>	<ul style="list-style-type: none"> <li>• Design Engineer</li> <li>• Electrical and Electronic Technician and Technologist</li> <li>• Electronics Engineer</li> <li>• Engineering and Related Technician and Technologist</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial Engineer</li> <li>• Labor Relations Manager</li> <li>• Manufacturing Engineer</li> <li>• Manufacturing Technician</li> <li>• Power Generating and Reactor Plant Operator</li> </ul>	<ul style="list-style-type: none"> <li>• Precision Inspector, Tester and Grader</li> <li>• Process Improvement Technician</li> <li>• Production Manager</li> <li>• Purchasing Agent</li> <li>• Supervisor</li> </ul>