



Wisconsin's Online Charter School

## Manufacturing Career Cluster

### PLAN OF STUDY

iForwardwisconsin.com

<http://www.careerclusters.org>

Name \_\_\_\_\_

School \_\_\_\_\_

Date \_\_\_\_\_

#### SAMPLE OCCUPATIONS RELATING TO THIS CAREER CLUSTER

Pathway	Occupations
<b>PRODUCTION</b>	Welder • Machinist & Tool Maker • Pipefitter,
<b>MANUFACTURING PROCESS PRODUCTION DEVELOPMENT</b>	Mechanical Engineer • Structural Engineer • Industrial Technology/Mechanic • Design Engineer • Industrial Engineer • Power Generating & Reactor Plant Operator • Purchasing Agent • Manufacturing Engineer • Precision Inspector/Tester/Grader
<b>MAINTENANCE, INSTALLATION &amp; REPAIR</b>	Boilermaker • Communication Systems Installer/Repairer • Computer Repair Technician (A+ Certification) • Electronics Technologist • Industrial Facilities Manager • Instrument Calibration & Repairer • Maintenance Repairer • Millwright • Plumber/Pipe Fitter/Steam Fitter
<b>QUALITY ASSURANCE</b>	Calibration Technician • Inspector • Quality Control Technician
<b>LOGISTICS &amp; INVENTORY CONTROL</b>	Dispatcher • Freight/Stock/Material Mover • Industrial Truck & Tractor Operator • Material Handler • Material Mover • Traffic/Shipping/Receiving Clerk
<b>HEALTH, SAFETY &amp; ENVIRONMENTAL ASSURANCE</b>	Environmental Engineer • Health & Safety Representative • Safety Coordinator • Safety Team Leader • Safety Technician

#### IFORWARD ONLINE HIGH SCHOOL - SUGGESTED COURSE OF HIGH SCHOOL STUDY

Language Arts *Required Courses (four credits required to graduate)	Math *Required Courses (three credits required to graduate)	Science *Required Courses (three credits required to graduate)	Social Studies *Required Courses (three credits required to graduate)	Physical Education *Required Courses (1.5 credits in PE and .5 in Health)	iForward Career & Technical Education and Other Electives (a total of three credits must be earned in foreign language, fine arts, or career and technical education – required to graduate)	Additional Suggested Learning Opportunities
<input type="checkbox"/> Grade 9 English I* <input type="checkbox"/> Grade 10 English II* <input type="checkbox"/> English III <input type="checkbox"/> English IV	<input type="checkbox"/> Algebra I* <input type="checkbox"/> Algebra II <input type="checkbox"/> Geometry <input type="checkbox"/> Pre-Calculus <input type="checkbox"/> Honors Calculus	<input type="checkbox"/> Physical Science* <input type="checkbox"/> Biology* <input type="checkbox"/> Chemistry <input type="checkbox"/> Physics	<input type="checkbox"/> U.S. History* <input type="checkbox"/> American Government*	<input type="checkbox"/> Physical Education <input type="checkbox"/> Personal Fitness <input type="checkbox"/> Health <input type="checkbox"/> Fitness Lifestyle Design	<input type="checkbox"/> Foreign Languages – Spanish & Chinese <input type="checkbox"/> International Business :Global Commerce in the 21 <sup>st</sup> Century <input type="checkbox"/> Personal & Family Finance	<b>School-Based:</b> <input type="checkbox"/> Internship <input type="checkbox"/> Job Shadowing <input type="checkbox"/> Service Learning Project  <b>Community-Based:</b> <input type="checkbox"/> Mentorship <input type="checkbox"/> Volunteer <input type="checkbox"/> Part-time Employment
22 Credits are required to graduate from iForward						

#### WISCONSIN APPRENTICESHIP OPPORTUNITIES AND POSTSECONDARY PROGRAMS RELATED TO THIS CAREER CLUSTER

Pathway	Apprenticeship Opportunities	Associate Degree or Less	Bachelors Degree	Masters Degree or More
<b>PRODUCTION</b>	<input type="checkbox"/> Machinist <input type="checkbox"/> Welder	<input type="checkbox"/> Welding (BTC, BJCC, CVTC, FVTC, GTC, LTC, MadATC, MSTC, MilATC, MPTC, NATC, NTC, NWTC, SWTC, WCTC, WTC, WITC) <input type="checkbox"/> Machinist & Tool Maker (FVTC, GTC, LTC, MilATC, MPTC, NATC, WCTC)		
<b>MANUFACTURING PROCESS PRODUCTION DEVELOPMENT</b>	<input type="checkbox"/> Machinist	<input type="checkbox"/> Automated Manufacturing Technician (FVTC, MilATC, NTC, WCTC) <input type="checkbox"/> Industrial Technology/Technician (BTC, MSTC, MilATC, MPTC, FVTC) <input type="checkbox"/> Industrial Engineering (BTC)	<input type="checkbox"/> Industrial Technology/Technician (UWPlatt) <input type="checkbox"/> Industrial Engineering (MSOE, UWMad, UWMil, UWPlatt)	<input type="checkbox"/> Industrial Engineering (UWMad, UWMil, UWStout)
<b>MAINTENANCE, INSTALLATION &amp; REPAIR</b>	<input type="checkbox"/> Boilermaker <input type="checkbox"/> Gas Appliance Servicer <input type="checkbox"/> Gas Main Fitter <input type="checkbox"/> Machinist <input type="checkbox"/> Plumber, Steamfitter/Pipefitter <input type="checkbox"/> Sheet Metal Worker <input type="checkbox"/> Sprinkler Fitters Apprenticeship <input type="checkbox"/> Welder	<input type="checkbox"/> Environmental Engineering (FVTC) <input type="checkbox"/> Mechanical Engineering Technician (MPTC) <input type="checkbox"/> Plumbing (BTC, CVTC, GTC, LTC, MSTC, MPTC, SWTC, WCTC, WITC) <input type="checkbox"/> Industrial Mechanics & Maintenance (BTC, CVTC, FVTC, GTC, LTC, MSTC, MilATC, MPTC, NWTC, SWTC, WCTC, WTC, WITC) <input type="checkbox"/> Welding Welding (BTC, BJCC, CVTC, FVTC, GTC, LTC, MadATC, MSTC, MilATC, MPTC, NATC, NTC, NWTC, SWTC, WCTC, WTC, WITC) <input type="checkbox"/> Machinist & Tool Maker (FVTC, GTC, LTC, MilATC, MPTC, NATC, WCTC) <input type="checkbox"/> Electrician (BTC, BJCC, CVTC, FVTC, GTC, MSTC, MilATC, MPTC, NWTC, SWTC, WCTC) <input type="checkbox"/> HVAC/R (CVTC, MilATC, MPTC, NWTC, WITC) <input type="checkbox"/> Water Treatment Technology (MilATC, MPTC)	<input type="checkbox"/> Environmental Engineering (UWWhit)	

<b>QUALITY ASSURANCE</b>	<input type="checkbox"/> Instrument Tech (Utilities)	<input type="checkbox"/> Machinist & Tool Maker (FVTC, GTC, LTC, MilATC, MPTC, NATC, WCTC)		
<b>LOGISTICS &amp; INVENTORY CONTROL</b>	<input type="checkbox"/> Truck Driver	<input type="checkbox"/> Truck Driving (CVTC, FVTC, WCTC) <input type="checkbox"/> Logistics, Materials, Supply Chain Management (FVTC, MilATC, NWTC)	<input type="checkbox"/> Logistics, Materials, Supply Chain Management (UWStout)	<input type="checkbox"/> Logistics, Materials, Supply Chain Management (UWMad, UWWhit)
<b>HEALTH, SAFETY &amp; ENVIRONMENTAL ASSURANCE</b>	For more about Apprenticeships: <a href="http://bat.doleta.gov/bat.cfm">http://bat.doleta.gov/bat.cfm</a>			

BJCC - Blackwell Job Corps Center, BTC - Blackhawk Technical College, CVTC - Chippewa Valley Technical College, FVTC - Fox Valley Technical College, GTC - Gateway Technical College, LTC - Lakeshore Technical College, MadATC - Madison Area Technical College, MilATC - Milwaukee Area Technical College, MPTC - Moraine Park Technical College, MSOE - Milwaukee School of Engineering, MSTC - Mid-State Technical College, NATC - Nicolet Area Technical College, NTC - Northcentral Technical College, NWTC - Northeast Wisconsin Technical College, SWTC - Southwest Wisconsin Technical College, UWMad - University of Wisconsin–Madison, UWMil - University of Wisconsin–Milwaukee, UWPlatt - University of Wisconsin–Platteville, UWStout - University of Wisconsin–Stout, UWWhit - University of Wisconsin–Whitewater, WCTC - Waukesha County Technical College, WITC - Wisconsin Indianhead Technical College, WTC - Western Technical College