

High School Name:
 Community College Name:
 CTE Program of Study Name:
 Date:

Portland Community College
 Manufacturing
 12/1/2016

2016

Health, Safety & Environmental Assurances Focus Area

Skills-to-Course Matrix

Instructions: 1) Enter your high school name above. 2) Enter the community college name. 3) Enter the Program of Study name. 4) Enter the date. 5) Click on Course 1, Course 2, etc. below and replace with your POS course names (or numbers). 6) Check those courses that trigger the TSA for this POS. 7) Finally, check those standards that are taught with intent and purpose, and are assessed in each course.

Focus Area Knowledge and Skills (CTE standards)

CCTC	Code Number	KS Statement	MCH 100 TSA?	MCH 105 TSA?	MCH 135 TSA?	MCH 120 TSA?	MCH 121 TSA?	MCH 115 TSA?	MCH 125 TSA?	MCH 130 TSA?	MCH 150 TSA?	MCH 205 TSA?	MCH 272 TSA?	MSD 115 TSA?	MCH 278 TSA?	MCH 280 TSA?	MCH 288A TSA?
MN-HSE 1	MNHS01	Demonstrate the safe use of manufacturing equipment.	X	X			X								X		
MN-HSE 2	MNHS02	Develop safety plans for production processes that meet health, safety and environmental standards.					X								X		
MN-HSE 3	MNHS03	Demonstrate a safety inspection process to assure a healthy and safe manufacturing environment.	X	X			X								X		
MN-HSE 4	MNHS04	Evaluate a system of health, safety and/or environmental programs, projects, policies or procedures to determine compliance.	X	X											X		
MN-HSE 5	MNHS05	Evaluate continuous improvement protocols and techniques in health, safety and/or environmental practices.	X	X													
MN-HSE 6	MNHS06	Conduct job safety and health analysis for manufacturing jobs, equipment and processes.					X								X		
MH-HSE 7	MNHS	Develop the components of a training program based on environmental health and safety regulations.													X		

High School Name:
 Community College Name: **Portland Community College**
 CTE Program of Study Name: **Manufacturing**
 Date: **12/1/2016**

Machining & Metalforming Focus Area

2016

Skills-to-Course Matrix

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Focus Area Knowledge and Skills (CTE standards)

CCTC	Code Number	KS Statement	MCH 100	MCH 105	MCH 135	MCH 120	MCH 121	MCH 115	MCH 125	MCH 130	MCH 150	MCH 205	MCH 272	MSD 115	MCH 278	MCH 280	MCH 288A
			TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?
	MNMF01	Perform skills necessary to operate metalforming equipment.										X	X				X
	MNMF02	Handle materials used in metalforming operations.							X			X					
	MNMF03	Perform skills necessary in planning and controlling metalforming operations.										X	X				
	MNMF04	Perform bench operations related to machining.										X					
	MNMF05	Perform metal cutting operations on a lathe.					X										
	MNMF06	Perform metal cutting operations on a mill.					X					X			X		X
	MNMF07	Perform metal cutting operations using contour sawing and electric discharge.															
	MNMF08	Perform metal cutting operations using a drill press.					X					X					
	MNMF09	Perform metal cutting operations using grinding equipment.										X					
	MNMF10	Perform inspection and quality assurance procedures in machining.					X					X	X				
	MNMF11	Understand properties of materials and their relationship to machining processes.					X	X				X	X				X

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2016

Mechanical CAD/Drafting Focus Area

Skills-to-Course Matrix

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Focus Area Knowledge and Skills (CTE standards)

CCTC	Code Number	KS Statement	Course														
			MCH 100	MCH 105	MCH 135	MCH 120	MCH 121	MCH 115	MCH 125	MCH 130	MCH 150	MCH 205	MCH 272	MSD 115	MCH 278	MCH 280	MCH 288A
			TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?
	MNPJ01	Apply measurement and scale concepts in drafting and design.		X		X							X				
	MNPJ02	Interpret engineering documents and control documents.											X				
	MNPJ03	Create technical sketches using drafting procedures.		X									X				
	MNPJ04	Use a CADD system and procedures.											X				
	MNPJ05	Detail projection views/components.											X				
	MNPJ06	Explore mechanical drafting/design concepts and problems.											X				
	MNPJ07	Demonstrate drafting/design concepts as related to basic manufacturing processes.		X									X				
	MNPJ08	Incorporate geometric dimensioning and tolerancing (GDT) standards.							X				X				
	MNPJ09	Depict assemblies of components.											X				

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Production Focus Area

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Focus Area Knowledge and Skills (CTE standards)

CCTC	Code Number	KS Statement	MCH 100	MCH 105	MCH 135	MCH 120	MCH 121	MCH 115	MCH 125	MCH 130	MCH 150	MCH 205	MCH 272	MSD 115	MCH 278	MCH 280	MCH 288A
			TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?
MN-PRO 1	MNPR01	Diagnose production process problems and take corrective action to meet production quality standards.															
MN-PRO 2	MNPR02	Manage safe and healthy production working conditions and environmental risks.	X				X										
MN-PRO 3	MNPR03	Make continuous improvement recommendations based on results of production process audits and inspections.															
MN-PRO 4	MNPR04	Coordinate work teams when producing products to enhance production process and performance.								X							
MN-PRO 5	MNPR05	Demonstrate the safe use of manufacturing equipment.					X								X	X	

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Secondary Wood Products Focus Area

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Focus Area Knowledge and Skills (CTE standards)

CCTC	Code Number	KS Statement	MCH 100	MCH 105	MCH 135	MCH 120	MCH 121	MCH 115	MCH 125	MCH 130	MCH 150	MCH 205	MCH 272	MSD 115	MCH 278	MCH 280	MCH 288A
			TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?	TSA?
	MNWPO1	Understand manufacturing processes related to secondary wood products.					X					X			X		X
	MNWPO2	Understand characteristics and properties of materials used in manufacturing secondary wood products.					X					X			X		X
	MNWPO3	Use appropriate techniques in manufacturing of secondary wood products.					X					X			X		X

