### 2019 **Skills-to-Course Matrix**

Manufacturing Vernonia High School
Portland Community College
Jun-19

Manufacturing Cluster

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Course 1 secondary NCES cod Identify the that are tal optional Fo industry for want to use

name. Course second NCES Identify that are optiona	3) Enter the content of the content	community college name. 4) Enter the date. 5) Click on the cell for curse 2 Name, etc., and replace with your POS course names-rear of post-secondary. 6) Enter school course numbers. 7) Enter ourse (secondary only). 8) Enter number of credits awarded. 9) as that trigger the TSA for this POS. 10) Finally, check those standards and number and purpose, and are assessed in each course. Note: The tabs below are included for those POSs that have a very specific ing those skill sets for multiple options in a Progam of Study or if you set of industry validated standards.	Introduction to Manufac	Juring to Mic and Tic	Intro to Chic	kahrication 1	(Course 5 Marie)	(Course 6 Marrel	(Course 1 Warre)	(Course 8 Marie)	(Course 9 Marrel	(Course to Marie)
			13202	13207	13249	13208	[Course Number]					
			13202	13207	13249	13208	[NCES Code]					
	<u>Clu</u>	ster Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]					
сстс*	Code Number	KS Statement	N	N	N	Υ	[TSAY or N?]					
MN 1	MN01	Evaluate the nature and scope of the Manufacturing Career Cluster <sup>™</sup> and the role of manufacturing in society and in the economy.	x									
MN 2	MN02	Analyze and summarize how manufacturing businesses improve performance.				x						
MN 3	MN03	Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.	x	x	x	x						
MN 4	MN04	Describe career opportunities and means to achieve those opportunities in each of the Manufacturing Career Pathways.	x	x	x	x						
MN 5	MN05	Describe government policies and industry standards that apply to manufacturing.	x	x	x	x						

#### **Skills-to-Course Matrix**

Manufacturing Vernonia High School Portland Community College Jun-19

CCTC\*

MN-HSE 1

MN-HSE 2

MN-HSE 3

MN-HSE 4

MN-HSE 5

MN-HSE 6

MH-HSE 7

**Health, Safety & Environmental Assurances** 

health and safety regulations.

#### **Focus**

**Area** 

<u>Instructions</u>: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click Name, Course 2 Name, etc., and replace with your POS course first year of post-secondary. 6) Enter school course numbers. 7) course (secondary only). 8) Enter number of credits awarded. 9 that trigger the TSA for this POS. 10) Finally, check those standa intent and purpose, and are assessed in each course. Note: The below are included for those POSs that have a very specific indu skill sets for multiple options in a Progam of Study or if you want industry validated standards.

e community urse 2 Name, f post-second condary only) the TSA for tourpose, and included for the courpose of the tree tourpose.	college name. 4) Enter the date. 5) Click on the cell for Course 1 etc., and replace with your POS course namessecondary and ary. 6) Enter school course numbers. 7) Enter NCES code for the . 8) Enter number of credits awarded. 9) Identify those courses his POS. 10) Finally, check those standards that are taught with are assessed in each course. Note: The optional Focus Area tabs nose POSs that have a very specific industry fociusare using those ions in a Progam of Study or if you want to use another set of ards.	Introduction to Manuf	acturing and the and the	Intro to CNC	Fabrication 1	Course 5 Marie 1	(Course o Marne)	(Course 1 Warne)	(Course & Marie)	(Course 9 Name)	(Course 10 Marne)
		13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
		13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Focus A	rea Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
Code Numbe		N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
MNHS01	Demonstrate the safe use of manufacturing equipment.	x x	x ·	x	,	[10/1 1 0 1 11]	[10/1   0.111]	[10/( 10/(1)	[10/1   0.111]	[10/( 10/(1)	[10/( 10/(1)
MNHS02	Develop safety plans for production processes that meet health, safety and	^	<u></u>	^	^						
WINTISUZ	environmental standards.	l <sub>x</sub>	x	x	x						
MNHS03	Demonstrate a safety inspection process to assure a healthy and safe										
	manufacturing environment.	x	x	x	x						
MNHS04	Evaluate a system of health, safety and/or environmental programs, projects,										
	policies or procedures to determine compliance.	х	х	х	х						
MNHS05	Evaluate continuous improvement protocols and techniques in health, safety										
	and/or environmental practices.				Х						
MNHS06	Conduct job safety and health analysis for manufacturing jobs, equipment										
	and processes.	<b> </b> _	v	l <sub>v</sub>	l <sub>v</sub>						
MNHS	Develop the components of a training program based on environmental	^	<u>'</u>	^	^						
INIINII	Develop the components of a training program based on environmental					1				1	

### **Skills-to-Course Matrix**

### Manufacturing

CCTC\*

MN-LOG 1

MN-LOG 2

MN-LOG 3

MN-LOG 4

Vernonia High School Portland Community College Jun-19

Code Number

MNLG01

MNLG02

MNLG03

MNLG04

### **Logistics & Inventory Control Focus Area**

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names--secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry validated standards

**Focus Area** Knowledge and Skills (CTE standards)

KS Statement

Demonstrate positive customer service skills in regard to logistics and inventory control

Demonstrate proper handling of products and materials in a manufacturing facility.

Develop a safety inspection process to assure a healthy and safe manufacturing

Manage inventory using logistics and control processes and procedures.

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	Introduction to Manufact	Intro to Mic and Tic	c <sub>M</sub> C	ion'	(Course 5 Name)	(Course 6 Martie)	ICOUISe T Name 1	Icourse & Marrel	(Course 9 Marne)	(Course to Marie)
if	Introduc	Intro to 1.	Intro to CNC	Fadrication	Course	Contes	Contes	Contes	Contes	Conte
	13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
	13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
ol										

#### **Skills-to-Course Matrix**

Manufacturing
Vernonia High School
Portland Community College
Jun-19

**Code Number** 

MNMF01

MNMF02 MNMF03

MNMF04

MNMF05

MNMF06

MNMF07

MNMF08

MNMF09

MNMF10

MNMF11

CCTC\*

### **Machining & Metalforming Focus Area**

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names-secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry validated standards.

Focus Area Knowledge and Skills (CTE standards)

metalforming operations.

electric discharge.

machining processes.

machinina.

**KS Statement** 

Perform skills necessary to operate metalforming equipment.

Perform metal cutting operations using contour sawing and

Perform metal cutting operations using grinding equipment.

Understand properties of materials and their relationship to

Perform inspection and quality assurance procedures in

Handle materials used in metalforming operations.

Perform skills necessary in planning and controlling

Perform metal cutting operations using a drill press.

Perform bench operations related to machining.

Perform metal cutting operations on a lathe.

Perform metal cutting operations on a mill.

Oi	ક્રેજ	cturing								
ery udy	Introduction to Manufa	Intro to Mic and Tic	Intro to CNC	Fabrication	(Course & Name)	(Course 6 Marie)	(Course 1 Warne)	(Course & Name)	(Course 9 Name)	(Course 10 Marine)
	13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
	13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
				х						
	Х		х	х						
			x							
			x						·	

#### **Skills-to-Course Matrix**

**Manufacturing** Vernonia High School Portland Community College Jun-19

CCTC\* Code Number

MN-MIR 1 MNMR01

MIN-MIR 2 MNMR02

MN-MIR 3 MNMR03

MN-MIR 4 MNMR04

MN-MIR 5 MNMR05

MN-MIR 6 MNMR06

### Maintenance, Installation & Repair Focus Area

<u>Instructions</u>: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names-secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this standards that are taught with intent and purpose, Note: The optional Focus Area tabs below are included specific industry fociusare using those skill sets for or if you want to use another set of industry validat

maintenance program.

ose courses t that are <u>taug</u> optional Foci dustry fociusa	that trigger the TSA for this POS. 10) Finally, check those that with intent and purpose, and are assessed in each course. The same as the same are included for those POSs that have a very are using those skill sets for multiple options in a Progam of Study to ther set of industry validated standards.	Introduction to Manufic	intro to MIG and TIG	Intro to CINC	Fabrication	(Course & Marie)	(Course 6 Marie)	Course 7 Marnel	(Course & Marne)	Course 9 Warrel	Course to Warrel	
		13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	
		13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	
Focus A	Area Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	
Code Number	KS Statement	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	
MNMR01	Demonstrate maintenance skills and proficient operation of equipment to maximize manufacturing performance.											
MNMR02	Demonstrate the safe use of manufacturing equipment to ensure a safe and healthy environment.											
MNMR03	Diagnose equipment problems and effectively repair manufacturing equipment.											
MNMR04	Investigate and employ techniques to maximize manufacturing equipment performance.											
MNMR05	Implement a preventative maintenance schedule to maintain manufacturing equipment, tools and workstations.											
MNMR06	Implement an effective, predictive and preventive manufacturing equipment											

#### **Skills-to-Course Matrix**

Manufacturing
Vernonia High School
Portland Community College
Jun-19

CCTC\*

MN-PPD 1 MNXA01

MN-PPD 2 MNXA02

MN-PPD 3 MNXA03

MN-PPD 4 MNXA04

MN-PPD 5 MNXA05

**Code Number** 

### **Manufacturing Production Process Development**

#### **Focus Area**

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names-secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry validated standards.

**Focus Area** Knowledge and Skills (CTE standards)

manage production of new and/or improved products.

within manufacturing production.

KS Statement
Produce quality products that meet manufacturing standards and exceed

Research, design and implement alternative manufacturing processes to

Implement continuous improvement processes in order to maintain quality

Monitor, promote and maintain a safe and productive workplace using techniques and solutions that ensure safe production of products.

Develop procedures to create products that meet customer needs.

ds u	Introduction to Manuta	cturing to Mic and Tic	Intro to CNC	Fabrication	(Course 5 Marre)	(Course 6 Name)	(Course 1 Marne)	(Course 8 Name)	(Course 9 Marne)	Course 10 Harres
	13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
	13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
				x						
			x							
	x	x	x	x						
	х	х	x	x						

#### **Skills-to-Course Matrix**

Manufacturing Vernonia High School **Portland Community College** Jun-19

**Code Number** 

MNPJ01

MNPJ02

MNPJ03 MNPJ04

MNPJ05

MNPJ06

MNPJ07

MNPJ08

MNPJ09

CCTC\*

### **Mechanical CAD/Drafting Focus Area**

<u>Instructions</u>: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names-secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a ve specific industry fociusare using those skill sets for multiple options in a Progam of St or if you want to use another set of industry validated standards.

**Focus Area** Knowledge and Skills (CTE standards)

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ar ur th gh	munity college name. 4) Enter the date. 5) Click on the cell for e 2 Name, etc., and replace with your POS course names-rof post-secondary. 6) Enter school course numbers. 7) Enter see (secondary only). 8) Enter number of credits awarded. 9) nat trigger the TSA for this POS. 10) Finally, check those nt with intent and purpose, and are assessed in each course. Its Area tabs below are included for those POSs that have a very like using those skill sets for multiple options in a Progam of Study other set of industry validated standards.	Introduction to Manuf	acturing to Mic and tic	Intro to CNC	Eabrication 1	(Course 5 Marne)	Course 6 Marnel	Course Thamel	Course 8 Marnel	(Course 9 Marne)	Course to Marnel
	1	13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
	!	13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Α	rea Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
er	KS Statement	N	N	N	Y	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	Apply measurement and scale concepts in drafting and design.			х							
	Interpret engineering documents and control documents.										
	Create technical sketches using drafting procedures.			х							
	Use a CADD system and procedures.			х							
	Detail projection views/components.	Х	х	х	х						
	Explore mechanical drafting/design concepts and problems.	х		х							
	Demonstrate drafting/design concepts as related to basic										
	manufacturing processes.	IX	X	X	X .						
	Incorporate geometric dimensioning and tolerancing (GDT)	x	x	x	l <sub>x</sub>						

### **Skills-to-Course Matrix**

Manufacturing Vernonia High School Portland Community College Jun-19

### **Production** Focus Area

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name.
3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1
Name, Course 2 Name, etc., and replace with your POS course names--secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondarigger the TSA and purpose, a are included for sets for multip validated standarians.

Name, C year of po- course (s trigger th and purp- are include sets for n	ourse 2 Name, ost-secondary. econdary only) e TSA for this Fose, and are asded for those P	college name. 4) Enter the date. 5) Click on the cell for Course 1 etc., and replace with your POS course namessecondary and first 6) Enter school course numbers. 7) Enter NCES code for the 8. 8) Enter number of credits awarded. 9) Identify those courses that POS. 10) Finally, check those standards that are taught with intent seessed in each course. Note: The optional Focus Area tabs below OSs that have a very specific industry fociusare using those skill in a Progam of Study or if you want to use another set of industry		acturing and TIG	Intro to CNC	Fabrication	(Course 5 Name)	(Course 6 Marie)	Course 1 Warrel	(Course 8 Marne)	(Course 9 Marne)	(Course to Name)
			13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
			13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
	Focus A	Area Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
ССТС*	Code Number	KS Statement	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
MN-PRO 1		Diagnose production process problems and take corrective action to meet production quality standards.	х	x	x	x						
MN-PRO 2	MNPR02	Manage safe and healthy production working conditions and environmental risks.	x	x	х	x						
MN-PRO 3		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.										
MN-PRO 5	MNPR05	Demonstrate the safe use of manufacturing equipment.	х	x	х	х						

### **Skills-to-Course Matrix**

Manufacturing Vernonia High School Portland Community College Jun-19

Code Number

MNQA01

CCTC\* MN-QA 1

MN-QA 2 MNQA02

MN-QA 3 MNQA03

MN-QA 4 MNQA04

MN-QA 5 MNQA05

MN-QA 6 MNQA06

MN-QA 7 MNQA07

### **Quality Assurance Focus Area**

<u>Instructions</u>: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace witl secondary and first year of post-secondary. 6) Enter so NCES code for the course (secondary only). 8) Enter no Identify those courses that trigger the TSA for this POS that are taught with intent and purpose, and are assess optional Focus Area tabs below are included for those industry fociusare using those skill sets for multiple opt want to use another set of industry validated standards

and first year e for the cours se courses th ught with inter ocus Area tabs ciusare using	2 Name, etc., and replace with your POS course names-of post-secondary. 6) Enter school course numbers. 7) Enter se (secondary only). 8) Enter number of credits awarded. 9) at trigger the TSA for this POS. 10) Finally, check those standards at and purpose, and are assessed in each course. Note: The selow are included for those POSs that have a very specific those skill sets for multiple options in a Progam of Study or if you of industry validated standards.	Introduction to Manufr	Leturing to Mic and Tic	Intro to CNC	Fadrication	[Course 5 Warne]	Course 6 Warre 1	Course Warrel	[Course & Warre]	Course 9 Marie 1	(Course to Marie)	
		13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	
		13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	
Focus A	rea Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	
Code Number	KS Statement	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	
MNQA01	Evaluate production operations for product and process quality.	X	х	х	х							
MNQA02	Recommend and implement continuous improvement in manufacturing processes.											
MNQA03	Coordinate work teams to create a product that meets quality assurance standards.		x		x							
MNQA04	Employ project management processes using data and tools to deliver quality, value-added products.											
	value-added products.											
MNQA05	Perform safety inspections and training to ensure a safe and healthy workplace.											
MNQA05 MNQA06												

### **Skills-to-Course Matrix**

### Manufacturing

Vernonia High School Portland Community College Jun-19

### **Secondary Wood Products Focus Area**

	<u> 300011</u>	daly Wood Floddets Focus Alea									
		e Program of Study name above. 2) Enter your high school name.									
,		ollege name. 4) Enter the date. 5) Click on the cell for Course 1									
Name, C	ourse 2 Name,	etc., and replace with your POS course namessecondary and first		ening							
year of po	ost-secondary. 6	s) Enter school course numbers. 7) Enter NCES code for the course		actuli							
(seconda	ary only). 8) Ente	r number of credits awarded. 9) Identify those courses that trigger		nufa	.C						
the TSA t	for this POS. 10	) Finally, check those standards that are <u>taught with intent and</u>	4	'g'	•		ne)	, and	a)	ne)	rel mel
purpose,	and are assess	ed in each course. Note: The optional Focus Area tabs below are	nio	'Gall	<b>√</b> C	2	Han.	Han.	Nan.	Harr.	Agu, Chai
included '	for those POSs	that have a very specific industry fociusare using those skill sets for	uctic	MILE	CA	ation	<b>رون</b> د	ر ق روف	رو <sup>م .</sup>	ુ <sup>રુ</sup> ં <sub>હ</sub> ું	e No
multiple o	options in a Pro	gam of Study or if you want to use another set of industry validated	*rodu	,,,o <sup>te</sup>	,,o <sup>to</sup>	abrica	COUITS	COULE	contra contra	COURS	COUITS
standards	S.		IUI	IUI	IUI	40	,ǰ	,Ç'	<i>ψ ψ</i>	رن*	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>
			13202	13207	13249	13208		Course Numbeiurs			
			13202	13207	13249	13208	[NCES Code]	[NCES Code] ICE	S Cod CES Cod	ICES Codic	CES Code]
	Focus A	Area Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits] of	Credit of Credi	t of Credit of	of Credits]
CCTC*	Code Number	KS Statement	N	N	N	Υ	[TSAY or N?]	[TSAY or N?]SA-	-Y or NSAY or	NSAY or NS	AY or N?]
	MNWP01	Understand manufacturing processes related to secondary wood products.									
	MNWP02	Understand characteristics and properties of materials used in manufacturing secondary									
		wood products.									
	MNWP03	Use appropriate techniques in manufacturing of secondary wood products.									

### **Skills-to-Course Matrix**

Manufacturing Vernonia High School **Portland Community College** Jun-19

Code Number

MNWL01

MNWL02

MNWL03

MNWL04

MNWL05

MNWL06

MNWL07

CCTC\*

### **Welding Focus Area**

<u>Instructions</u>: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names-secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a ve specific industry fociusare using those skill sets for multiple options in a Progam of St or if you want to use another set of industry validated standards.

**Focus Area** Knowledge and Skills (CTE standards)

preparation.
Understand basic welding metallurgy.

ear ours th igh cu	munity college name. 4) Enter the date. 5) Click on the cell for 2 Name, etc., and replace with your POS course names-of post-secondary. 6) Enter school course numbers. 7) Enter se (secondary only). 8) Enter number of credits awarded. 9) at trigger the TSA for this POS. 10) Finally, check those twith intent and purpose, and are assessed in each course. So Area tabs below are included for those POSs that have a very re using those skill sets for multiple options in a Progam of Study other set of industry validated standards.	Introduction to Manuf	acturing to Mic and Tic	Intro to CNC	Fabrication	(Course 5 Name)	(Course 6 Name)	(Course T Name)	(Course 8 Marine)	(Course 9 Marine)	(Course to Marne)
		13202	13207	13249	13208	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
		13202	13207	13249	13208	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Aı	ea Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
er	KS Statement	N	N	N	Y	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	Perform safety, health, inspection, and repair processes related to welding and thermal cutting.  Perform entry level welding processes using a variety of welding technologies including shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), and gas tungsten welding (GTAW).  Perform thermal cutting process using a variety technologies including manual oxyfuel gas cutting (OFC), mechanized oxyfuel gas cutting (track burner), plasma arc cutting (PAC), and air carbon arc cutting (CAC-A). Interpret drawing and welding symbols.  Perform advanced level welding processes using a variety of welding technologies including shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), and gas tungsten welding (GTAW).	x x	x x	x x x	x x x						
	Perform operations related to shop equipment used in welding, layout, and part										