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

Manufacturing **Westview High School** Portland Community College Mar-19

CCTC\* Code Number

MN01

MN02

MN04

MN 3 MN03

## **Manufacturing Cluster**

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 <u>assessed</u> 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.

manufacturing.

Describe government policies and industry standards that apply to

SA for each of the second seco	or this POS. 10) Finally, check those standards that are taught with and are assessed in each course. Note: The optional Focus Area tabs or those POSs that have a very specific industry fociusare using those options in a Progam of Study or if you want to use another set of industry.	Creative Design	Creative Design 2	Manufacturing 1	(Course & Name)	(Course & Marne)	(Course 5 Name)	(Course 6 Name)	(Course 1 Name)	[Course a Name]	(Course 9 Name)	(Course to Marte)	
		A5131	A5132	AS171	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	
		13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	
Cluster Knowledge and Skills (CTE standards)		0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	
ber	KS Statement	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	
	Evaluate the nature and scope of the Manufacturing Career Cluster $^{TM}$ and the role of manufacturing in society and in the economy.												
	Analyze and summarize how manufacturing businesses improve performance.												
	Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.												
	Describe career opportunities and means to achieve those opportunities in each of the Manufacturing Career Pathways.												
	Describes an experience to a lister and industry, at an devide that a wall to										1		

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

Manufacturing **Westview High School Portland Community College** 

**Code Number** 

MNHS01

MNHS02

MNHS03

MNHS04

MNHS05

MNHS06

MNHS

Mar-19

CCTC\*

MN-HSE 1

MN-HSE 2

MN-HSE 3

MN-HSE 4

MN-HSE 5

MN-HSE 6

MH-HSE 7

### **Manufacturing Cluster**

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		A5131	A5132	AS171	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
		13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Cluster Knowledge and Skills (CTE standards)		0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
Code Number	KS Statement	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
/NHS01	Demonstrate the safe use of manufacturing equipment.										
/NHS02	Develop safety plans for production processes that meet health, safety and environmental standards.										
NHS03	Demonstrate a safety inspection process to assure a healthy and safe manufacturing environment.										
	Evaluate a system of health, safety and/or environmental programs, projects, policies or procedures to determine compliance.										
	Evaluate continuous improvement protocols and techniques in health, safety and/or environmental practices.										
NHS06	Conduct job safety and health analysis for manufacturing jobs, equipment										
/NHS	Develop the components of a training program based on environmental										

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

## Manufacturing

CCTC\*

MN-LOG 1

MN-LOG 2

MN-LOG 3

MN-LOG 4

**Westview High School** Portland Community College Mar-19

Code Number

MNLG01

MNLG02

MNLG03

MNLG04

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**Cluster** Knowledge and Skills (CTE standards)

Manage inventory using logistics and control processes and procedures.

ool ts a sta op cius	course numbers. 7) Enter NCES code for the course (secondary only). awarded. 9) Identify those courses that trigger the TSA for this POS. andards that are taught with intent and purpose, and are assessed in otional Focus Area tabs below are included for those POSs that have a sare using those skill sets for multiple options in a Progam of Study or if of industry validated standards	Creative Design	Creative Design 2	Manufacturing 1	(Course & Name)	(Course A Marne)	(Course 6 Marne)	Course Thamel	(Course & Name)	(Course 9 Marne)	(Course to Marie)
		A5131	A5132	AS171	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
		13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
us	ter Knowledge and Skills (CTE standards)	0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
er	KS Statement	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	Demonstrate positive customer service skills in regard to logistics and inventory control issues.										
	Demonstrate proper handling of products and materials in a manufacturing facility.										
	Develop a safety inspection process to assure a healthy and safe manufacturing facility.										

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

#### Manufacturing

CCTC\*

**Westview High School Portland Community College** Mar-19

**Code Number** 

MNMF01

MNMF02 MNMF03

MNMF04

MNMF05

MNMF06

MNMF07

MNMF08

MNMF09 MNMF10

MNMF11

#### **Manufacturing Cluster**

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**Cluster** Knowledge and Skills (CTE standards)

machining processes.

machinina.

Understand properties of materials and their relationship to

nat nt v s . re	trigger the TSA for this POS. 10) Finally, check those with intent and purpose, and are assessed in each course.  Area tabs below are included for those POSs that have a very using those skill sets for multiple options in a Progam of Study her set of industry validated standards.	Creative Design	Creative Design 2	Manufacturing 1	[Course a Name]	(Course a Marie)	(Course 6 Name)	(Course 1 Name)	(Course 8 Name)	(Course 9 Name)	Course to Marie 1
		A5131	A5132	AS171	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
		13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
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	Perform skills necessary to operate metalforming equipment.										
	Handle materials used in metalforming operations.										
	Perform skills necessary in planning and controlling										
	metalforming operations.  Perform bench operations related to machining.										
	Perform metal cutting operations on a lathe.										
	Perform metal cutting operations on a mill.								_		
	Perform metal cutting operations using contour sawing and										
	electric discharge.										
	Perform metal cutting operations using a drill press.										
	Perform metal cutting operations using grinding equipment.										
	Perform inspection and quality assurance procedures in										

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

Manufacturing Westview High School Portland Community College Mar-19

CCTC\* MN-MIR 1

MIN-MIR 2

MN-MIR 3

MN-MIR 4

MN-MIR 5

MN-MIR 6

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			A5131	A5132	AS171	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]	[Course Number]
			13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Cluster Knowledge and Skills (CTE standards)			0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
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1	MNMR01	Demonstrate maintenance skills and proficient operation of equipment to maximize manufacturing performance.										
2	MNMR02	Demonstrate the safe use of manufacturing equipment to ensure a safe and healthy environment.										
3	MNMR03	Diagnose equipment problems and effectively repair manufacturing equipment.										
4	MNMR04	Investigate and employ techniques to maximize manufacturing equipment performance.										
5	MNMR05	Implement a preventative maintenance schedule to maintain manufacturing equipment, tools and workstations.										
6	MNMR06	Implement an effective, predictive and preventive manufacturing equipment maintenance program.										

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		13003	13003	13003	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]	[NCES Code]
Clust	er Knowledge and Skills (CTE standards)	0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
CCTC* Code Number	KS Statement	N	N	Υ	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
MN-PPD 1 MNXA01	Produce quality products that meet manufacturing standards and exceed customer satisfaction.										
MN-PPD 2 MNXA02	Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.										
MN-PPD 3 MNXA03	Monitor, promote and maintain a safe and productive workplace using techniques and solutions that ensure safe production of products.										
MN-PPD 4 MNXA04	Implement continuous improvement processes in order to maintain quality within manufacturing production.										
MN-PPD 5 MNXA05	Develop procedures to create products that meet customer needs.										

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

#### Manufacturing

CCTC\* Code Number
MNPJ01

MNPJ02 MNPJ03

MNPJ04

MNPJ05

MNPJ06

MNPJ07

MNPJ08

MNPJ09

Westview High School Portland Community College Mar-19

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Cluster Knowledge and Skills (CTE standards)		0.5	0.5	1	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]	[# of Credits]
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IPJ01	Apply measurement and scale concepts in drafting and design.										
IPJ02	Interpret engineering documents and control documents.										
IPJ03	Create technical sketches using drafting procedures.										
IPJ04	Use a CADD system and procedures.										
IPJ05	Detail projection views/components.										
PJ06	Explore mechanical drafting/design concepts and problems.										
IPJ07	Demonstrate drafting/design concepts as related to basic manufacturing processes.										
	Incorporate geometric dimensioning and tolerancing (GDT) standards.										
IPJ09	Depict assemblies of components.										