Skills-to-Course Matrix

Drafting Technology
St Helens High School
Portland Community College 2/28/2019

Engineering Technology 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 Note:

tandards that are <u>taught with intent and purpose</u> , and are <u>assessed</u> in each course. ote: The optional Focus Area tabs below are included for those POSs that have a very pecific industry fociusare using those skill sets for multiple options in a Progam of Study r if you want to use another set of industry validated standards.				Drafting 2	Drafting 2	Dratting 3	Drafting ³	Drafting A	Orating A	CADD 160	CADD 175	CADD 126
			21102	211061	211062	2110331	2110332	2110341	2110342	25326	13186	25328
			21102	21106	21106	21103	21103	21103	21103			
	Clu	ster Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4	3	3
стс*	Code Number	KS Statement	N	N	N	N	Υ	N	N			
	EN01	Use effective communication skills with a variety of audiences.				Х	Х	Х	Х	Х	Х	Х
	EN02	Exhibit integrity and professionalism in engineering cluster occupations.										
			Х	X	Х	X	X	Х	X	Х	X	X
	EN03	Use technology such as computers and design software to solve engineering problems.	X	x	x	x	x	x	x	x	x	x
	EN04	Understand and use applied mathematics and science for engineering cluster										
		careers.	X	X	X	X	Х	X	X	X	X	X
	EN05	Develop and implement a career plan within the engineering cluster occupations.						X	X			
	EN06	Use teamwork, critical thinking and problem solving skills to address complex problems in engineering.					х	x	х	Х	х	x
	EN07	Understand the role of engineering in society throughout history and how it is affected by economics, regulations, politics, and corporate culture.										
	EN08	Apply design principles and life-cycle methodology to create products, systems, and processes using appropriate technology.				х	x	x	Х	х	x	X
	EN09	Understand the impact personal characteristics, such as creativity, resourcefulness, the ability to visualize and the ability to think abstractly have on engineers and their ability to design.				x	x	x	x	x	X	x
	EN10	Understand and adhere to safety, health, and environmental standards and regulations.							х		Х	X

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			21102	211061	211062	2110331	2110332	2110341	2110342	[Course Number]	[Course Number]	[Course Number]
			21102	21106	21106	21103	21103	21103	21103	[NCES Code]	[NCES Code]	[NCES Code]
	<u>Cluster</u>	Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]
CCTC*	Code Number	KS Statement	N	N	N	N	Υ	N	N	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
		Understand the laws of thermodynamics and their application in the analysis of chemical engineering problems.										
	ENCS02	Understand and apply knowledge of chemistry in the solving of chemical engineering problems.										
		Understanding of chemical engineering processes.										

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			21102	211061	211062	2110331	2110332	2110341	2110342	[Course Number]	[Course Number]	[Course Number]
			21102	21106	21106	21103	21103	21103	21103	[NCES Code]	[NCES Code]	[NCES Code]
	Clu	ster Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]
ССТС*	Code Number	KS Statement	N	N	N	N	Υ	N	N	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	ENCV01	Understand and use material science to solve problems appropriate to civil engineering.										
	ENCV02	Demonstrate knowledge of fluid dynamics.										
	ENCV03	Demonstrate knowledge of structural dynamics.										
	ENCV04	Understand and apply basic principles of environment quality.										
	ENCV05	Understand and apply knowledge of soil structure and mechanics to solve problems in civil engineering.										
	ENCV06	Understand and use local, regional, national and global spatial data infrastructures.										
	ENCV07	Understand and apply the principles of surveying in civil engineering.										

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			21102	211061	211062	2110331	2110332	2110341	2110342	[Course Number]	[Course Number]	[Course Number]
			21102	21106	21106	21103	21103	21103	21103	[NCES Code]	[NCES Code]	[NCES Code]
Cluster Knowledge and Skills (CTE standards)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]
CCTC*	Code Number	KS Statement	N	N	N	N	Υ	N	N	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	ENES01	Understand and apply electrical theory and laws.										
	ENES02	Demonstrate knowledge and application of transistors.										
	ENES03	Understand and apply circuit concepts and analysis techniques.										
	ENES04	Demonstrate knowledge of circuit design and fabrication.										
	ENES05	Understand and apply digital concepts and circuitry.										
	ENES06	Demonstrate knowledge of power sources and power supplies.										
	ENES07	Demonstrate knowledge of communication systems.										
	ENES08	Understand and perform skills for system integration and amplification.										
		Communicate using symbols, measurements, conventions, icons, and graphic images.										

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			21102	211061	211062	2110331	2110332	2110341	2110342	[Course Number]	[Course Number]	[Course Number]
			21102	21106	21106	21103	21103	21103	21103	[NCES Code]	[NCES Code]	[NCES Code]
	Cluster Knowledge and Skills (CTE standards)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]
CCTC*	Code Number	KS Statement	N	N	N	N	Υ	N	N	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	ENMN01	Use knowledge of material science to solve problems appropriate to manufacturing engineering.										
	ENMN02	Demonstrate knowledge of planning and logistics requirement in manufacturing engineering.										
		Demonstrate an understanding of quality control.										
	ENMN04	Understand and apply basics of supply chain management.										
	ENMN05	Understand and apply knowledge of manufacturing processes and practices.										
	ENMN06	Demonstrate basic knowledge of packaging within manufacturing.										

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			21102	21106	21106	21103	21103	21103	21103	[NCES Code]	[NCES Code]	[NCES Code]
	<u>Cluste</u>	r Knowledge and Skills (CTE standards)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	[# of Credits]	[# of Credits]	[# of Credits]
CCTC*	Code Number	KS Statement	N	N	N	N	Y	N	N	[TSAY or N?]	[TSAY or N?]	[TSAY or N?]
	ENMS01	Understand and use principles of machine theory.										
	ENMS02	Demonstrate knowledge of fluid dynamics.										
	ENMS03	Demonstrate knowledge of statics and dynamics in mechanical systems.										
	ENMS04	Use knowledge of material science to solve problems appropriate to										
		manufacturing engineering.										
	ENMS05	Demonstrate knowledge of thermal dynamics.										