

2019

Skills-to-Course Matrix

Architectural Drafting/Construction

Aloha High School

Portland Community College

1-Sep

Architecture & Construction 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 assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

			Architecture Design 1A	Architecture Design 1B	Architecture Design 2A	Architecture Design 2B	Construction	Construction 2	Drafting 1	Drafting 2	Woodworking 1	Woodworking 2	Woodworking 3
			A5411	A5412	A5421	A5422	A590X	A591X	A531X	A532X	A551X	A552X	A553X
			05192	05192	05192	05192	17002	17002	21102	21102	17006	17006	17006
			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CCTC*	Code Number	KS Statement	Y	Y	N	N	N	N	Y	N	N	N	N
AC 1	AC01	Use vocabulary, symbols, and formulas commonly used in design and construction.	X	X	X	X	X	X			X	X	X
AC 2	AC02	Use architecture and construction skills to create and manage a project.	X	X	X	X	X	X			X	X	X
AC 3	AC03	Comply with regulations and applicable codes to establish and manage a legal and safe workplace/jobsite.	X	X	X	X	X	X			X	X	X
AC 4	AC04	Understand the nature and scope of the Architecture & Construction Career Cluster™ and the role architecture and construction play in society and the economy.		X		X	X	X					
AC 5	AC05	Understand the roles and responsibilities among trades and professions, including labor/management relationships.	X	X	X	X	X	X					
AC 6	AC06	Read, interpret, and use technical drawings, documents, and specifications to plan a project.	X	X	X	X	X	X		X	X	X	X
AC 7	AC07	Evaluate a wide range of career pathway opportunities for success in architecture and construction careers.	X	X	X	X	X	X		X		X	X

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Construction Management Focus Area

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			05192	05192	05192	05192	17002	17002	21102	21102	17006	17006	17006
			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CCTC*	Code Number	KS Statement	Y	Y	N	N	N	N	Y	N	N	N	N
AC-CST 1	ACCS01	Understand contractual relationships with all parties involved in the building process to ensure successful build of a project.											
AC-CST 2	ACCS02	Understand approval procedures to ensure effective flow of information in the construction process.											
AC-CST 3	ACCS03	Understand and implement testing and inspection procedures to ensure successful completion of a construction project.					X	X					
AC-CST 4	ACCS04	Understand the purpose of scheduling as it relates to the successful completion of a construction project.											
AC-CST 5	ACCS05	Understand and apply practices and procedures required to maintain jobsite safety.					X	X	X	X	X	X	X
AC-CST 6	ACCS06	Manage relationships with internal and external parties to successfully complete construction projects.											
AC-CST 7	ACCS07	Compare and contrast the building systems and components for a given project.											
AC-CST 8	ACCS08	Demonstrate the construction crafts required for each phase of a given project.					X	X					
AC-CST 9	ACCS09	Safely use and maintain appropriate tools, machinery, equipment, and resources to accomplish construction project goals.					X	X					

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Design/Pre-construction Focus Area

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			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cluster Knowledge and Skills (CTE standards)													
CCTC*	Code Number	KS Statement	Y	Y	N	N	N	N	Y	N	N	N	N
AC-DES 1	ACDP01	Justify design solutions through the use of research documentation and analysis of data.											
AC-DES 2	ACDP02	Use effective communication skills and strategies (listening, speaking, reading, writing, and graphic communications) to work with clients and colleagues.	X	X	X	X							
AC-DES 3	ACDP03	Understand the integral systems that impact the design of buildings and structures.	X	X	X	X							
AC-DES 4	ACDP04	Apply building codes, laws, and rules in the design and construction of projects.	X	X	X	X	X	X					
AC-DES 5	ACDP05	Identify the diversity of needs, values, and social patterns in project design, including accessibility standards, to appropriately meet client needs.		X		X							
AC-DES 6	ACDP06	Apply the techniques and skills of modern drafting, design, engineering, and construction to projects.	X	X	X	X				X			
AC-DES 7	ACDP07	Employ appropriate representational media to communicate concepts and design.											
AC-DES 8	ACDP08	Apply principles, conventions, standards, applications, and restrictions pertaining to the selection and use of construction materials, components, and assemblies for project design.	X	X	X	X	X	X		X			

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Masonry Focus Area

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			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CCTC*	Code Number	KS Statement	Y	Y	N	N	N	N	Y	N	N	N	N
	ACMS01	Understand safe use of equipment in elevated masonry work.											
	ACMS02	Perform appropriate construction inspection and quality control.											
	ACMS03	Understand the safe use of equipment and materials in high-rise construction work.											
	ACMS04	Use appropriate masonry tools and equipment.					X	X					
	ACMS05	Understand the components of mortar and how to mix those components properly.					X	X					
	ACMS06	Understand masonry units and installation techniques.					X	X					
	ACMS07	Apply masonry techniques to residential construction.					X	X					
	ACMS08	Understand and use appropriate techniques for reinforced masonry.					X	X					
	ACMS09	Understand how metal work is used in masonry.					X	X					
	ACMS10	Apply advanced masonry laying techniques.					X	X					
	ACMS11	Understand the relationships between masonry construction techniques and moisture control.											
	ACMS12	Apply appropriate masonry construction techniques to a variety of materials and conditions.											
	ACMS13	Repair and restore masonry structures.					X	X					

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Residential Electric Focus Area

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		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CCTC*	Code Number	KS Statement										
		Y	Y	N	N	N	N	Y	N	N	N	N
	ACRE01	Apply electrical theory to circuits including concepts of alternating current.										
	ACRE02	Use electrical test equipment.										
	ACRE03	Understand how to use the National Electrical Code®										
	ACRE04	Prepare electrical conduit for installation.										
	ACRE05	Identify and Install fasteners and anchors.										
	ACRE06	Install raceways, boxes, cable trays, and fittings.										
	ACRE07	Install Conductors										
	ACRE08	Read and understand electrical blueprints.										
	ACRE09	Install wiring in switches and enclosures in commercial settings.										
	ACRE10	Install wiring in residential settings.										
	ACRE11	Understand the principles of grounding.										
	ACRE12	Install boxes and fittings.										
	ACRE13	Prepare conductor terminations and splices.										
	ACRE14	Install electrical services.										
	ACRE15	Understand circuit breakers and fuses.										
	ACRE16	Understand contactors and relays.										
	ACRE17	Install electric lighting										
	ACRE18	Calculate loads for branch and feeder circuits.										
	ACRE19	Select appropriate conductors.										
	ACRE20	Determine appropriate overcurrent protection.										
	ACRE21	Understand requirements for raceway, box, and fitting fill.										
	ACRE22	Understand requirements for wiring devices.										
	ACRE23	Understand and inspect distribution equipment.										
	ACRE24	Understand the purpose and function of lamps, ballasts, and their components.										
	ACRE25	Use appropriate wiring methods for hazardous locations.										
	ACRE26	Identify practical lighting requirements.										
	ACRE27	Identify and install heat tracing and freeze protection systems.										
	ACRE28	Complete high voltage terminations and splices.										

