

Pathway Crosswalk

Cluster/Pathway: Architectural Drawing & Design		EOPA: Autodesk Revit Architecture Certified User Skills		Test Provider: Certiport
EOPA Standard	% of Assessment	GA Pathway Standard #	Specific Competency, Topic or Skill	Instructional Materials/Resources

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<p>User Interface</p> <ol style="list-style-type: none"> 1. Identify primary parts of the User Interface (UI).(Tabs, Application menu, Info Center, Ribbon, Elevation tag, Status bar, View control Bar 2. Name the key features of the ribbon. Define how a split button works. Demonstrate the three ways the ribbon can be displayed (Full ribbon, Min to Panel tiles, Min to tabs) demonstrate how to detach a panel and move it on the screen. 3. Describe the hierarchy in the project browser for a new project. 4. Define what “Context” means when right clicking in the drawing window. 5. Name the tools found on the “Application Menu” (Save, Plot, Export and Print) or What tools are found on the “Application Menu” 6. Demonstrate how to add items to the Quick Access Toolbar 7. Describe why the “Option Bar” changes. 8. Describe the function of the “Status Bar”. 9. Describe what hitting the escape key does. 10. Describe what double clicking on an elevation view marker does. 11. Demonstrate how to turn on/off the 3D Indicator 		<p>AC-IDD-9</p>	<p>Demonstrate the knowledge and skills of computer operations.</p> <p>9.1 Demonstrate definitions and procedures for file management techniques: copying, deleting, finding, saving, and renaming, based on operating/applications systems.</p> <p>9.2 Use an on-line help tutorial based on the application system.</p> <p>9.3 Demonstrate the ability to open a drawing file and create a drawing.</p> <p>9.4 Identify and use all major components of hardware associated with a CAD system.</p>	
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<ol style="list-style-type: none"> 12. Demonstrate how to change the view scale. 13. Describe the functionality of the ViewCube. 14. Describe what the home icon does. 15. Demonstrate how to change the navigation bar opacity 16. Describe how to zoom using the Navigation bar 17. Describe the quickest way to zoom in or out 18. Describe the quickest way to pan. 				
<p>File management</p> <ol style="list-style-type: none"> 1. Define the acronym “BIM” and why it is important to Revit users. 2. Define a template file. 3. Identify the file extension of a project file. 4. Identify the file extension of a template file. 5. Identify the file extension of a Revit family file. 6. Demonstrate how to open a Revit file. 		AC-IDD-9	<p>Demonstrate the knowledge and skills of computer operations.</p> <p>9.1 Demonstrate definitions and procedures for file management techniques: copying, deleting, finding, saving, and renaming, based on operating/applications systems.</p> <p>9.2 Use an on-line help tutorial based on the application system.</p> <p>9.3 Demonstrate the ability to open a drawing file and create a drawing.</p> <p>9.4 Identify and use all major components of hardware associated with a CAD system.</p>	

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		AC-ADDII-4	<p>Read and Interpret plumbing plans.</p> <p>4.1 Read and interpret basic codes and symbols related to plumbing plans.</p> <p>4.2 Apply plumbing symbols to a floor plan.</p> <p>4.3 Demonstrate using Computer-Aided Design (CAD) software related to plumbing plans.</p>	
<p>Columns and Grids</p> <ol style="list-style-type: none"> 1. Identify the uses of a grid. 2. Create an equally spaced grid pattern. 3. Lists the options available when placing and modifying grids. 4. Place columns on grid. 5. Lists the options available when placing and modifying columns. 6. List the tools you can use to modify columns and grids. 		<p>AC-ADDI-3</p> <p>Demonstrate architectural drafting skills.</p> <p>3.1 Read and interpret existing architectural drawings.</p> <p>3.2 Measure using an architect’s and an engineer’s scale.</p> <p>3.3 Calculate volume and area related to architectural drafting.</p>		
		AC-ADDI-4	<p>Prepare residential floor plans.</p> <p>4.1 Research and describe general codes related to floor plans.</p> <p>4.2 Sketch to scale residential floor plans.</p> <p>4.3 Draw dimensioned floor plans using appropriate symbols.</p> <p>4.4 Apply appropriate dimensioning rules.</p> <p>4.5 Incorporate aspects of sustainable and universal design.</p> <p>4.6 Demonstrate the use of the Computer-Aided Design (CAD) software related to residential floor plans problem solving.</p>	
		AC-ADDI-6	<p>Prepare elevations for residential drawings.</p> <p>6.1 Explain the purpose of elevations.</p> <p>6.2 Sketch elevations.</p> <p>6.3 Create elevation drawings with labels and dimensions to include: roof slope and overhang, type of roofing, door and window location, and porches.</p> <p>6.4 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing elevations for residential drawings.</p>	
		AC-ADDII-5	<p>Demonstrate preparing sections and details.</p> <p>5.1 Describe the purpose of sections and details.</p> <p>5.2 Create a wall section to scale, including labeling and dimensions.</p> <p>5.3 Generate cabinet sections. Include labeling and dimensions.</p> <p>5.4 Generate building sections to include labeling and dimensions.</p> <p>5.5 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing sections and details.</p>	

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<p>Roofs and Floors</p> <ol style="list-style-type: none"> 1. Create a roof. 2. Set the floor type. Create a floor. 		<p>AC-ADDI-2</p>	<p>Demonstrate and explain the preparation of site plans.</p> <p>2.2 Identify and restate topology and pertinent information on an existing site plan, including meridian arrow, contour lines, property lines, and utility mains.</p> <p>2.3 Create a site plan for a building using correct symbols, including contour lines, property lines, utility mains, topographical features, and meridian arrow.</p> <p>2.4 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing site plans.</p>	
		<p>AC-ADDI-4</p>	<p>Prepare residential floor plans.</p> <p>4.1 Research and describe general codes related to floor plans.</p> <p>4.2 Sketch to scale residential floor plans.</p> <p>4.3 Draw dimensioned floor plans using appropriate symbols.</p> <p>4.4 Apply appropriate dimensioning rules.</p> <p>4.5 Incorporate aspects of sustainable and universal design.</p> <p>4.6 Demonstrate the use of the Computer-Aided Design (CAD) software.4.6 related to residential floor plans problem solving.</p>	
		<p>AC-ADDI-5</p>	<p>Research roof systems, styles and terminology.</p> <p>5.1 Recognize and compile various styles and constructions of roof systems, including hip, gable, mansard, gambrel, shed, and flat.</p> <p>5.2 Identify and explain basic roofing terminology, including: rise, run, slope, pitch, overhang, eave line, and ridge line.</p> <p>5.3 Research and compare environmental and sustainability issues in relation to roof design.</p> <p>5.4 Assess aesthetics of roofs.</p> <p>5.5 Demonstrate the use of Computer-Aided Design (CAD) software related to problem solving roof systems.</p>	
		<p>AC-ADDI-6</p>	<p>Prepare elevations for residential drawings.</p> <p>6.1 Explain the purpose of elevations.</p> <p>6.2 Sketch elevations.</p> <p>6.3 Create elevation drawings with labels and dimensions to include: roof slope and overhang, type of roofing, door and window location, and porches.</p> <p>6.4 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing elevations for residential drawings.</p> <p>Demonstrate preparing foundation plans.</p> <p>8.1 Explain the purpose of foundation plans.</p>	

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		AC-ADDI-8	8.2 Identify different foundation systems and terminology, including: slab, crawl space, and basement. 8.3 Draw dimensioned foundation plans. 8.4 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing foundation plans.	
		AC-ADDII-5	Demonstrate preparing sections and details. 5.1 Describe the purpose of sections and details. 5.2 Create a wall section to scale, including labeling and dimensions. 5.4 Generate building sections to include labeling and dimensions. 5.5 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing sections and details.	
		AC-ADDII-6	Create a project presentation for a building. 6.1 Research architectural presentations. 6.2 Prepare one-point and two-point perspectives of a building. 6.3 Create a rendering of a building. 6.4 Draw a set of plans to demonstrate comprehension of residential drawing and design standards. 6.5 Build a physical three-dimensional (3D) model based on researched architectural plans. 6.6 Generate a presentation using a virtual walk-through on a house (optional dependent upon software capabilities). 6.7 Demonstrate the use of Computer-Aided Design (CAD) software related to creating project presentations.	
Sketching 1. Sketch geometry and profiles using all sketching tools. 2. Fillet Objects. 3. Trim objects. 4. Describe the benefits of using snaps 5. List the short cuts to toggle osnap on and off		AC-IDD-5	Create technical freehand sketches. 5.1 Demonstrate orthographic sketches. 5.2 Demonstrate pictorial sketches.	

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		AC-ADDII-6	<p>Create a project presentation for a building. 6.1 Research architectural presentations. 6.4 Draw a set of plans to demonstrate comprehension of residential drawing and design standards. 6.7 Demonstrate the use of Computer-Aided Design (CAD) software related to creating project presentations.</p>	
<p>Schedules</p> <ol style="list-style-type: none"> 1. Create door schedule. 2. Create window schedule 3. Create room schedule. 4. Add schedule tags. 5. Add keynotes. 		<p>AC-ADDI-7</p> <p>Demonstrate preparing schedules. 7.1 Explain the purpose of schedules on a set of architectural drawings. 7.2 Generate the following schedules: window, door, and finish. 7.3 Demonstrate the use of Computer-Aided Design (CAD) software related to preparing schedules.</p> <p>AC-ADDII-6</p> <p>Create a project presentation for a building. 6.4 Draw a set of plans to demonstrate comprehension of residential drawing and design standards. 6.7 Demonstrate the use of Computer-Aided Design (CAD) software related to creating project presentations.</p>		
<p>Construction Document Sets</p> <ol style="list-style-type: none"> 1. Create title sheet with sheet list. 2. Create view/sheet sets for printing 3. Place generic lights 4. Set solar angle 		<p>AC-ADDI-9</p> <p>Maintain a course portfolio. 9.1 Complete a set of residential house plans incorporating course standards (ongoing).</p> <p>AC-ADDII-6</p> <p>Create a project presentation for a building. 6.1 Research architectural presentations. 6.2 Prepare one-point and two-point perspectives of a building. 6.3 Create a rendering of a building. 6.4 Draw a set of plans to demonstrate comprehension of residential drawing and design standards. 6.5 Build a physical three-dimensional (3D) model based on researched architectural plans. 6.6 Generate a presentation using a virtual walk-through on a house (optional dependent upon software capabilities). 6.7 Demonstrate the use of Computer-Aided Design (CAD) software related to creating project presentations.</p> <p>AC-ADDII-7</p> <p>Maintain a course portfolio. 7.1 Complete a set of residential house plans incorporating course standards (ongoing).</p>		