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| 1.00 | Understand Foundation Design, Calculations and Construction |
| 1.01 | Understand terms and definitions relating to foundation design, calculations and construction. (Review Architecture II) |
| 1.02 | Understand use of footings, foundation walls, girders, piers, ventilation, and slab floor/foundations. |
| 2.00 | Apply Procedures to Create Basic Electrical Design Concepts |
| 2.01 | Apply terms and symbols used to indicate electrical fixtures in a residential design. |
| 2.02 | Apply the rules and standards for electrical fixture placement. |
| 2.02 | Apply the rules and standards for electrical fixture placement and create an electrical/lighting plan using 3D CAD software, such as Revit Architecture.<br>**Note**: Revit Arch Certification concepts to be reviewed as it relates to electrical symbols and schedules:<br><br>o Component (all): Types, Placing Components, Families |
| 3.00 | Apply Procedures to Create Stair/Railing Designs for Construction |
| 3.01 | Apply terms and definitions relating to stair design and construction. |
| 3.02 | Apply the parts and standards used to construct various stair system and types (Straight, Curved, with landings and turns). |
| 3.03 | Applythe calculations for rise, run, total rise, total run, and floor cutout. |
| 3.04 | Apply typical railing design and construction for stairs, landings and decks. |
| 3.05 | Apply accepted procedures to draw plans for stair construction using 3D CAD software, such as Revit Architecture.<br>**Note**: Revit Arch Certification concepts to be reviewed as it relates to stairs and railings:<br><br>o Component (all): Stair Types & properties, Stair Placement Options, Railing types and Properties, Railing Placement Options |
| 4.00 | Apply Procedures to Create Advanced Kitchen and Bath Details |
| 4.01 | Apply terms, concepts and elements related to kitchen and bath details and design. |
| 4.02 | Apply plans for kitchen cabinet drawings, standard sizes and configurations. |
| 4.03 | Apply procedures to draw enlarged detailed plans and interior elevations for kitchens and baths using 3D CAD software, such as Revit Architecture.<br>**Note**: Revit Arch Certification concepts to be reviewed, as it relates to adding cabinets, bath/plumbing fixtures and appliances:<br><br>o Component (all): Types, Placing Components, Families. |
| 5.00 | Apply Procedures to Create Multi-level Residential Floor Plans |
| 5.01 | Understand terms, definitions and accepted principles related to 2-story or multi-level residential space planning. |
| 5.02 | Understand residential door and window types (review of Level II Arch). |
| 5.03 | Understand floor plan symbols for doors, windows and room identification. |
| 5.04 | Understand the steps in drawing, dimensioning, and annotating a 2 story or multi-level floor plan. |
| 5.05 | Apply procedures to design, draw and annotate a 2 story or multi-level residential floor plan, including foundation plan using 3D CAD, BIM software. |

**Note**: Revit Arch Certification concepts to be reviewed:

o User Interface (all): Definitions, UI Navigation/Interaction, Drawing Window, Navigation Control, Zoom
o File Management: Definitions, Project Files, Open Existing Revit Projects, Create New Revit Project, Save
o Walls (all): Placing Walls, Options Bar, Openings, Join, Materials
o Doors (all): Placing Doors, Options Bar, Tags, Model in Place
o Windows (all): Placing Windows, Options Bar, Tags, Model in Place
o Component (all): Types, Placing Components, Families
o Annotations (all): Text, Dimensions, Tags
o Levels (all): Definitions, Adding Levels, Level Properties

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| 6.00 | Apply procedures to create a Site Development Plan |
| 6.01 | Apply terms related to site development. |
| 6.02 | Apply factors to be considered when developing a site for residential construction. |
| 6.03 | Apply the lines, symbols, and features found on site plans. |
| 6.04 | Apply how to develop a site plan drawing. |
| 6.05 | Apply accepted procedures to draw a site plan for a residential structure using 3D CAD software, such as Revit Architecture. |
| 7.00 | Apply Procedures and Construction Techniques to Create a Small Commercial Building Design |
| 7.01 | Apply various types of small commercial design projects. |
| 7.02 | Apply the different construction practices from residential to commercial; metal studs vs. wood construction, steel beams. |
| 7.03 | Apply commercial reflected ceiling plans, including lighting layout, electrical and fire protection symbols. |
| 7.04 | Apply Grid and column design and layout, labeling. |
| 7.05 | Apply multi-story stair design for commercial buildings. |
| 7.06 | Apply procedures to draw a small commercial building using 3D CAD software, such as Revit Architecture. |

**Note**: Revit Arch Certification concepts to be introduced:

o Columns and Grids (all): Definitions, Adding Grids, Grid Properties, Adding Columns, Column Properties, Modifying Columns.

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| 8.00 | Apply Procedures to Create Rendering and Walkthroughs |
| 8.01 | Apply the definition, purpose and techniques for a 3D rendering of a building. |
| 8.02 | Apply interior lighting and exterior solar effects on a building design. |
| 8.03 | Apply how camera angles affect perspective views of a building, interior and exterior. |
| 8.04 | Apply 3D building walkthroughs. |
| 8.05 | Apply CAD techniques to create a 3D rendering of an architectural model using 3D CAD software, such as Revit Architecture. |

**Note**: Revit Arch Certification concepts to be introduced:

o Views: Cameras, Walkthroughs
o Construction Document Sets: Rendering, Lights, Solar Studies