Collin College - Continuing Education

Course Syllabus

Course Title: Revit Architecture Essentials

Course Description:
Introduction to Revit Architecture for building information modeling.

Course Prerequisite(s):
Familiarity with Windows XP

Course Objectives:
Describe benefits of BIM bidirectional associatively; demonstrate navigation of Revit Architecture interface, manage views, and identify the different types of building elements.

Next Class Possibilities:
Building Information Modeling Basic, Advanced

Textbook(s):
Introducing Autodesk Revit Architecture 2013 Essentials
Sybex (Wiley); ISBN: 978-1118244784
Flash drive USB storage media (thumb drive) is recommended, not required

Major Topic Outline
1. Building Information Modeling (BIM); Revit Building Interface
2. Starting a Design; the Basics of Building
3. Using Dimensions and Constraints
4. Developing the Building Model
5. Using Building components
6. Creating Schedules
7. Detailing and Drafting
8. Presenting the Building Model

Detailed list:
Revit Concepts
- Parametric Objects
- Bidirectional Associativity
- Embedded relationships
- User-defined rules

Types of elements
- List of categories: Settings/Object Styles
- Model categories
- Annotation categories
- Subcategories
- Families:
  o System families
  o Standard families
  o In-Place Families
Starting Revit: Start Page

Revit Interface
- Title bar, Toolbars, Ribbon
- Type Selector, Properties button, Options bar
- Status bar, Design bar
- Project Browser—organization, optional views
- Families—loaded, not necessarily used
- Revit links
- View window—multiple, active
- View control bar:
  - Scale, Detail level, Model graphic style, Advanced model graphics
  - Crop region, Hide and isolate—temporary or permanent
  - Annotation crop, Reveal mode

Selection and View Navigation
- Mouse left, right buttons & wheel
- Steering wheels
  - Zoom, Pan, Rewind, Orbit, Look, Center, Top Down
- View Cube

Selecting objects
- Click on object
- Window left to right
- Window right to left
- Control key to add more; Shift key to deselect objects

Manipulating objects
- Grip editing
- Move and copy
- Smart constraints
- Flip controls
- Padlocks to maintain relative position of elements
- Pin tool to keep objects from moving in space

Keyboard shortcuts
- Tab—use to cycle between various elements
- Shift+tab—reverses the default order of cycling
- Delete
- Undo and redo: Ctrl+Z and Ctrl+Y
- Multiple undo—pull-down list
- Spacebar—cycle through rotations and choices

Modeling Environment
- Snaps: Settings/Snaps
- Close (a loop)
- Line weights
- Object Styles
- Options

Views
- Creating Views—View tab in Design Bar
- Navigating views
- Creating grids and levels
- View range
- Callouts, Elevations, Sections
• Drafting views
• Legends
• 3D View—Axonometric Views
• 3D View—Perspective (camera) views
• Walkthroughs
Schedules
Modeling Basics
• Levels and Grids—manipulating
• Basic Walls
• Wall properties
• Wall layers and materials
• Curtain walls
• Floors
• Roofs
• Ceilings
• Doors and Windows
Stairs and Railings