TRITON COLLEGE – ARC 262
CLASS ASSIGNMENT
FEBRUARY 2, 2008

Welcome to <u>ARC 262 – BIM Production</u>

Course Description:

Principles of Building Information Modeling (BIM) technology solutions using Autodesk Revit Architecture Parametric Building Modeling (PBM) software to create building model simulations for design visualization, analysis, to develop construction documents and leverage the building projects digital information database throughout the design process.

Overall Learning Goal:

To create a Parametric Building Modeling (PBM) using Autodesk Revit Architecture 2008 software and develop a comprehensive set of production drawings using several BIM technology solution software. The building project includes architectural process project scheduling and management, architectural contours and site development, sun studies, building modeling techniques, detailed plans and schedules.

Course Resources:

CAD and BIM Technology Software:

   <u>Autodesk</u> Revit Architecture 2008, AutoCAD 2008, Impression and Design Review

   <u>Google:</u> Google Earth and SketchUp

   <u>Adobe:</u> PDF Writer

   <u>Microsoft Office Suites:</u> Project, Word and Excel

Tutorial Workbook and Exercises:

> Autodesk Revit Architecture 2008 On-Line tutorials
>
> Autodesk Revit Architecture 2008 Users Guide
>
> Are available at (http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=9481365

   Instructor Tutorial Workbook and Exercises located on the T: drive under the ARC262 folder

   Autodesk Revit Internet Based Content Resources will be listed in the weekly lesson assignments.

Additional Assignments

   Additional Readings and Videos for Review with a written report submitted.

   Quizzes

   Project Deliverables

ARC 262 – February 2, 2008 Class Assignments

1. *Read and Review* the Preface and Chapters 1, 2 and 3 in the Instructor Tutorial Workbook and Exercises and answer the quiz questions posted on the ARC 262 web-page.

    a. Preface

        ▪ Introduction to Revit Architecture 2008

        ▪ Setting Up and Using the Exercises

        ▪ Introduction to Building Information Modeling

        ▪ Fundamental Concepts Revit Architecture 2008

        ▪ Understanding Revit Architecture 2008 Terms

    b. The Revit Architecture 2008 Interface

    c. Building Information Modeling

    d. Using Revit Architecture 2008

2. Do the *Lesson Exercises* in Chapters 2, 3 and 4 which include:

    a. The Revit Architecture 2008 Interface (do not save project files)

    b. Building Information Modeling (do not save project files)

    c. Using Revit Architecture 2008 (do not save project files)

    d. Starting a Design –

    This chapter covers the following topics and exercises:

        ▪ Starting a New Project. (save the project to your account folder as Starting a New Design – [your first/last initials])

        ▪ Importing an AutoCAD (DWG) – Site Model 2007.dwg found in the Chapter 4 – Starting a Design folder. (continue working on the project from your account folder Starting a New Design – [your first/last initials]). Save your project when exercise is completed.

        ▪ Creating the Basic Mass, Mass Details and Converting the Mass to Building Elements (save the project to your account folder as Working with Masses – [your first/last initials]).

        ▪ Creating Levels (open the project from your account folder as Starting a New Design – [your first/last initials]) to continue working. Save your project when exercise is completed.

        ▪ Creating Column Grids (continue working on the project from your account folder Starting a New Design – [your first/last initials]). Save your project when exercise is completed.

        ▪ Adding Column Grids (continue working on the project from your account folder Starting a New Design – [your first/last initials]). Save your project when exercise is completed.

3. Reading and Exercises from additional required resources:

   a. Autodesk Revit Architecture 2008 HELP (HELP menu or F1) or Autodesk Revit Architecture 2008 Users Guide (HelpBuildingENU.pdf)

      - Chapter 1 – Welcome to Revit Architecture 2008
        Memory Usage pages 14 – 16.
      - Chapter 3 – Getting Started
        1. Using the Revit Interface
        2. What is a Project
        3. Building with Elements
        4. Massing Studies

   b. Autodesk Revit Architecture 2008 Imperial Tutorials (HELP menu Tutorials) or (TutorialsBuildingImpENU.pdf)

      - Part 1 – Getting Started/Chapter 1 – Introduction (read through the chapter)
      - Part 2 – Developing Your Designs/Chapter 2 – Creating a Building Information Model (read through and do the following exercises).
        1. Creating the Project
        2. Adding Project Levels
        3. Creating a Column Grid

4. Additional Readings and Reports

   a. Autodesk University 2007 Session – AB210-2P Sustainable Design Systems Based on Revit® Architecture: This link to **AU** web-site
   http://hosted.mediasite.com/hosted4/Viewer/Viewers/ViewerAudioOnly.aspx?mode=Default&peid=54ead29f-5e94-47ef-938b-1c4c732d6bbe&playerType=WM7&mode=Default&shouldResize=true&pid=5c29ad1f-730e-4f4c-96a2-1f588045f506&playerType=WM7
   The video focuses on Kenneth Hall's, Gensler, presentation at Autodesk University 2006,an overview of sustainability and its relevance to the AEC industry. In this presentation, you will get the rest of the story -- how to use Revit Architecture and related tools to design and deliver high-performance. Presentation time – 1 Hour 29 Minutes 5 Seconds

   b. Resource Papers

      - *Sustainable Design Standard and Analysis Software Resource* (FYI)
      - *Digital Design and the Age of Building Simulation* by Paul Seletsky SEC Bytes 103105.doc (FYI)
      - The Current Architectural Production Methodology by David R. Scheer, AIA (FYI)
      - Barriers to the Adoption of BIM in the Building Industry an Autodesk White Paper.

Review and discussion of the Additional Readings and Reports will be held at the February 9, 2008 class.