



# Broward Community College

## Course Outline

STATUS:   A  

COMMON COURSE NUMBER:   ARC 1056C  

COURSE TITLE:   Digital Media  

CREDIT HOURS:       2      

**CONTACT HOURS BREAKDOWN:**

Lecture/Discussion	<u>      16      </u>
Lab	<u>      32      </u>
Other	<u>                  </u>
Contact Hours/Week	<u>      3      </u>

**CATALOG COURSE DESCRIPTION:** Course is designed to provide a survey of current computer aided design software related to architecture and building construction. Lab work concentrates on a variety of computer applications applicable to the design process. Students will learn to apply virtual building technology to design, production, collaboration and information analysis of a project.

Prerequisite:

Co requisite:

**UNIT TITLES:**

1. Concepts and Tools
2. Project and Office Set-Up
3. Creating a Virtual Building: Structurally
4. Creating a Virtual Building: Internally
5. Visualization
6. Project Information
7. Document Layout
8. Project Management and Coordination
9. Project

LAST REVIEW   Academic Year 2002-2003   NEXT REVIEW   Academic Year 2007-08  

*Interim Revision Dates:*

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## **I. Course Overview:**

Upon successful completion of this course, the students should be able to understand how to apply virtual building technology to design, production, collaboration and information analysis of a project. The software will allow for a complete solution built on the foundation of architecture.

## **II. Units:**

### **Unit 1. 1. Concepts and Tools**

#### General Outcome:

- 1.0 The students should be able to understand the interactive environment and drawing process between a floor plan, section/elevation and 3D window.

#### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Understand virtual building basics by creating walls, inserting objects, changing wall properties and creating a calculation list.
- 1.2 Use tools and palettes to customize the workplace.
- 1.3 Apply cursor forms to drawing methods.
- 1.4 Identify key editing and notation methods.
- 1.5 View and edit the 3D environment of a virtual building.
- 1.6 Understand how to change, add and delete libraries from project file.

## Unit 2. 2. Project and Office Set-Up

### General Outcome:

2.0 The students should be able to customize options, define project preferences, and manage information.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

2.1 Customize option settings for pens, colors, line types, fill types and composites.

2.2 Define drawing preferences by setting types of measurements.

2.3 Manage information by using layers to turn information on or off.

2.4 Use quick views and favorites to set up project views, display options, scale and layer.

### Unit 3. 3. Creating a Virtual Building: Structurally

#### General Outcome:

3.0 The students should be able create the structural elements of a virtual building.

#### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 3.1 Create floor assemblies and be able to use the building slab as a modeling tool.
- 3.2 Build, move and shape walls and columns.
- 3.3 Apply dimensions to walls and columns.
- 3.4 Use the coordinate systems
- 3.5 Place and view doors and windows, insert part and editable parameters.
- 3.6 Create a custom stair and handrail using geometry of the stair and editing parameters.
- 3.7 Create roofs by building roof geometry types.
- 3.8 Build, move and edit beams and roof framing elements.

**Unit 4. 4. Creating a Virtual Building: Internally**

General Outcome:

4.0 The students should be able to create the internal components of a virtual building.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Place, edit and create furniture and equipment.
- 4.2 Place, edit and create ceilings and lights.
- 4.3 Add details to walls by including a variety of moldings, panels and wainscot options.
- 4.4 Use several techniques to create site layout.
- 4.5 Set up and assign zones and define sections and elevation views.
- 4.6 Customize 2D and 3D library parts.

**Unit 5. 5. Visualization**

General Outcome:

5.0 The students should be able to show the effects of the sun, perspectives, and objects on a building and its materials.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 5.1 Create and assign material and texture settings.
- 5.2 Apply rendering settings and understand the effects of photo-rendering settings.
- 5.3 Create 3D cutaway sections.
- 5.4 Define perspectives and animations
- 5.5 Use the sun study and define settings.
- 5.6 Work with scanned photographs as the background of a rendering.

## Unit 6. 6. Project Information

### General Outcome:

6.0 The students should be able to customize schedules and templates that list project information assigned to elements and objects.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

6.1 Describe list schemes, elements, components and zones.

6.2 Calculate menu appearance.

6.3 Link schedules to parameters within each door and window.

6.4 Input details, pricing, UV ratings, hardware types, material for door and windows.

**Unit 7. 7 Document Layout**

General Outcome:

7.0 The students should be able to save plan drawings elevations and sections as Plot Maker drawings placed on sheet layouts in Plot Maker.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

7.1 Save floor plan, elevation, section and 3D view as Plot Maker drawings.

7.2 Create sheet layouts for a Plot Maker drawing.

7.3 Set up a new layout and drawing scale.

7.4 Create a drawing frame and drawing layers.

7.5 Update linked drawings.

7.6 Print and plot from the software used.

## Unit 8. 8. Project Management and Coordination

### General Outcome:

8.0 The students should be able to insert hot linked modules into a file to update all instances in a file facilitating communication between project members and designers during a project.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 8.1 Link external drawings, manage and project drawings and update hot links.
- 8.2 Mark up information and styles by entering commentary.
- 8.3 Publish project documents and use Project Reviewer to archive a project.
- 8.4 Manage a project team by sharing a project by the internet or file sharing.
- 8.5 Send and receive changes.
- 8.6 Archive a project model and its related library.

**Unit 9. 9 Project**

General Outcome:

9.0 The students should be able to initiate and execute a 2D and 3D plan and layout for a "client" with a specific job request.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

9.1 Produce a finished project and be able to email and demonstrate the project.

9.2 Demonstrate knowledge of presentation strategies for visual ideas.

9.3 Demonstrate knowledge of the basic art of persuasion through speaking while presenting a project.

9.4 Practice presenting a project to the class for peer review.

9.5 Make any necessary revisions according to input.

9.6 Present as part of portfolio to industry for approval.