

New Fall 2005

KEAN UNIVERSITY

Union, New Jersey

3D MODELING AND RENDERING FOR INTERIOR DESIGNERS I

Course number:	INT 4141
Semester hours:	Three
Prerequisite:	INT 3140
Type of course:	Computer-Aided Design
Limitation on enrollment:	16

Catalog Description

Advanced lecture/studio course focusing on the use of 3D modeling and rendering computer applications in the field of Interior Design. Basic computer commands and software will be covered as applied to the field of interior design. Includes use of this technology in initial concept development, design refinement and proposal presentation.

Prerequisites: INT 3140 Computer-Aided Design for Interiors II

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I. Course Objectives

- A. Apply level II applications of computer-aided design in the refinement of schematic based design concepts
- B. Develop the skills and command usage necessary to use AutoCAD in the 3D environment
- C. Understand file organization and management, as related to time optimization for concept development and refinement
- D. Become aware of the various formats, sources, and devices for the collection and input of digital graphic images and their use in Interior Design

II. Course Content

- A. Applications in Interior Design
 - 1. Applications development in Interior Design
 - 2. System configuration and optimization
 - 3. File organization and management
 - 4. Augmenting the design process
 - 5. Applications analysis and comparison
 - 6. Relationship to other project management applications
- B. Basic drawing controls
 - 1. Manipulation of 3D commands
 - 2. Development of wire frame models
 - 3. Development of surface and solid models
 - 4. Creation of drawing planes
 - 5. Develop rapid visualization techniques with hide and shade
 - 6. Rendering of surface models

- C. Concept development
 - 1. Isometric drawing
 - 2. Manipulation the X,Y,Z planes
 - 3. Develop basic geometric models
 - 4. Manipulate multiple viewports
- D. Drawing development and editing
 - 1. Architectural and structural parameters
 - 2. Combining of geometric entities
 - 3. Materials library development
- E. Output controls and devices.
 - 1. Plotting and printing devices
 - 2. Output scales and ratios
 - 3. Electronic file transfers and formats
 - 4. Data backup and storage

III. Methods of Instruction

- A. Lecture
- B. Class discussion
- C. Demonstration
- D. Studio projects
- E. Critiques of works in progress

IV. Methods of Evaluation

- A. Weekly drawing assignments
- B. Term project development
- C. Participation in discussions and critiques
- D. Article reviews/critiques
- E. Final project

V. Required Text

ASCENT – Center for Technical Knowledge
AutoCAD 2007 3D Drawing and Modeling

VI. Bibliography
Print

Aubin, Paul F.; Mastering Autodesk Architectural Desktop.
Albany: Autodesk Press, 2002

Beach, Robert C.; An Introduction to the Curves and Surfaces of Computer-Aided Design. New York: Van Nostrand Reinhold, 1991.

Bousquet, Michele and Hester, Jeff. AutoCAD: 3-D Design and Presentation.
Carmel, IN: New Riders, 1994.

Bradberry, John L. Computer Graphics Environments. Carmel, IN: New Riders,
1996.

Ching, Francis D.K. Interior Design Illustrated. New York: Van Nostrand
Reinhold, 1995.

Ethier, Stephen, J. AutoCAD in 3 Dimensions Using AutoCAD 2000.
Upper Saddle River: Prentice Hall, 2000.

Feng, Jim. Basic AutoCAD for Interior Designers Using Release 14.
Upper Saddle River: Prentice Hall, 1999.

Frey, David. AutoCAD 2000 No Experience Required.
San Francisco: Sybex, 1999.

Goldman, Glenn. Architectural Graphics, Traditional and Digital Communication.
Upper Saddle River: Prentice Hall, 1997.

Grabowski, Ralph. Using AutoCAD 2002. Albany: AutoDesk Press, 2002.

Hsu, Tai-Ran and Sinha, Dipendra K. Computer-aided Design: An Integrated Approach. St. Paul: West, 1992.

Jefferis, Alan. AutoCAD 2002 for Architecture. Albany: AutoDesk Press, 2002.

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Kark-McLain, Joan. The designer's AutoCAD release 14 Tutorial. Cincinnati:
Dame, 1998

Kerlow, Isaac V. The Art of 3-D Computer Animation and Imaging. New York:
Wiley, 2000.

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- Kirkpatrick, Beverly, L. AutoCAD for Interior Design and Space Planning Using AutoCAD 2000. Upper Saddle River, NJ: Prentice Hall, 2000.
- Matthews, Brian. AutoCAD 2000 3D. Scottsdale: Coriolis, 1999.
- Nichols, Karen. Michael Graves Buildings & Projects. New York: Rizzoli, 1995.
- Novitski, B. J. Rendering Real And Imagined Buildings. Gloucester, MA: Rockport, 1998.
- Rogers, David F. and Adams, J. Alan. Mathematical Elements for Computer Graphics. New York: McGraw-Hill, 1990.
- Ryan, Daniel L. CAD/CAE Descriptive Geometry. Ann Arbor: CRC, 1992.
- Saufley, Ted. AutoCAD Advanced Modeling. South Holland, IL: Goodheart-Willcox, 1994.
- Scully, Vincent. Robert A.M. Stern buildings & Projects. New York: Rizzoli, 1992.
- Stewart, Michael D. et. al.. Modeling for Design Using AutoCAD. Boston: PWS, 1996.
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- Tickoo, Sham. Customizing AutoCAD 2002. Albany: AutoDesk Press, 2002.
- Trachte, Judith A. A Quick Start to AutoCAD for Interior Design. Upper Saddle River, NJ: Prentice-Hall, 2000.
- Wilson, John. AutoCAD 2000: Avisual Approach. Albany: AutoDesk Press, 2000.

VII. Non-Print

<http://usa.autodesk.com/adsk/servlet/section1?siteID=123112&id=331041>

http://www.dezignare.com/computer_software2.html

<http://www.cadalyst.com/index.cfm>

<http://cadshack.com/>

<http://www.cadoutpost.com/catalog.html>

<http://www.thecadstore.com/home.php>

<http://www.ascented.com/courseware.htm>

<http://www.journeyed.com/home.asp>

<http://www.aia.org/>