



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2008-2009
(i.e. 2003-2004)

NEXT REVIEW: 2013-2014
(i.e. 2008-2009)

STATUS: A
(A, I, D)

COURSE TITLE: Architectural Design I

COMMON COURSE NUMBER: ARC 1301

CREDIT HOURS: 4

CONTACT HOUR BREAKDOWN
(per 16 week term)

CLOCK HOURS:
(Voc. Course ONLY)

Lecture: 32 Lab: 64

Clinic: Other:

PREREQUISITE(S):

COREQUISITE(S):

PRE/COREQUISITE(S): ARC1126C

COURSE DESCRIPTION *(750 characters, maximum):*

This course covers basic two and three-dimensional design fundamentals, architectonic principles and architectural design skills. Techniques of model making are learned through explorations in defining and understanding architectural space.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): Area

General Education Requirements – Associate in Science Degree (AS), meets Area(s): Area

UNIT TITLES

1. **Basic 3-dimensional Design Explorations (40% of classes)**
2. **Basic 3-dimensional Design Explorations on Organizations of Space (30% of classes)**
3. **Design Explorations of Composition of Space based on Architectonic Ordering Principles (30% of classes)**
4. **Architectural Model Making (within the Design assignments)**



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EVALUATION:

Please provide a brief description (250 characters maximum) that details how students will be evaluated on the course outcomes.

Upon successful completion of this course, the students should be able to understand and apply basic 2-dimensional and 3-dimensional design fundamentals and architectonic principles; understand and define architectural space, develop basic architectural design skills, architectural model making and architectural drawing skills.

**** Complete the following only if course is seeking general education status ****

GENERAL EDUCATION Competencies and Skills*:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Write clearly and coherently	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: <i>(highlight in green ALL that apply)</i> (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

** General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*



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UNITS

Unit 1 Basic 3-dimensional Design Explorations - 40% of Class
Assignments (6 weeks)

General Outcome:

1.0 The student shall: The students should be able to manipulate and understand basic linear, planar and volumetric (spatial) architectural elements directly in three-dimensions.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Apply basic linear, planar and volumetric (spatial) architectural elements in a model layout.
- 1.2 Understand and apply spatial tension between basic architectural elements.
- 1.3 Understand the importance of implied planes and volumes in spatial definition.
- 1.4 Develop a basic vocabulary of architectural space from space-defining basic architectural elements.

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Unit 2 Basic 3-dimensional Explorations of Organizations of Space - 30% of Class Assignments (5 weeks)

General Outcome:

2.0 The student shall: The students should be able to understand the organization of space as a fundamental architectonic principle and to apply it in design.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Understand the different organizations of space: linear, centralized, radial, cluster and grid.
- 2.2 Understand the difference between 2-dimensional vs. 3-dimensional organization of space.
- 2.3 Understand composition of space within the different organizations.
- 2.4 Understand and create a space-dominant architectural design as opposed to mass-dominant design.
- 2.5 Understand basic spatial forms including a cube, cylinder, pyramid or a tetrahedron, cone and sphere.
- 2.6 Understand the principles of proportions in space composition.
- 2.7 Understand and apply horizontal and vertical spatial flow.



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Unit 3 Design Explorations of Composition of Space based on
Architectonic Ordering Principles - 30% of Class Assignments
(5 weeks)

General Outcome:

3.0 The student shall: The students should be able to create a composition of space based on architectonic ordering principles and elementary building functions.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Create a spatial composition of architectural spatial units and assemblies based on architectonic principles and to satisfy the needs of an elementary user program.
- 3.2 Understand the difference between the ordering principles (hierarchy, axis, repetition, rhythm, symmetry and transformation).
- 3.3 Understand and apply geometrical alignments, collisions of space, space within a space and articulation of form.
- 3.4 Develop a spatial model from the resolution of activities into space-forms.
- 3.5 Understand the difference between circulation and usable spaces.
- 3.6 Understand the difference between basic types of zoning within and without a building, to include public, semi-public, semi-private and private zones.
- 3.7 Understand and develop a basic building partii.
- 3.8 Understand and create diagrams for circulation, zoning, stacking and partii.



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Unit 4 Architectural Model Making (within the Design assignments)

General Outcome:

4.0 The student shall: The students should be able build and use schematic architectonic models as design tools.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Use basic model making tools and materials.
- 4.2 Understand and use architectonic models as design tools
- 4.3 Understand and apply the difference between architectonic process, rough, working or bug models and final design models.
- 4.4 Understand and produce excellent model-making craftsmanship.



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Unit 5 Basic Architectural Drafting (within the design assignments:

General Outcome:

5.0 **The student shall:** The students should be able to develop basic architectural orthographic drawings.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Use basic drafting tools.
- 5.2 Understand and apply the principles of orthographic projection.
- 5.3 Develop architectural freehand sketching of floor plans, elevations and sections.
- 5.4 Develop hand-drafted floor plans (with fill in texture), elevations and sections of models.
- 5.5 Understand and apply good line quality: line weight and line density.
- 5.6 Use lines to create textures, line weight for emphasis, and line types for differentiation of expression.
- 5.7 Understand and use basic architectural hand lettering.
- 5.8 Understand and use architectural scale.
- 5.9 Draw walls, windows, doors, stairs, kitchen, and bathrooms in a design floor plan.
- 5.10 Understand and apply axonometric principles and the difference between plan obliques and isometrics.
- 5.11 Draw a hand drafted plan oblique of a model.
- 5.12 Draw inked floor plans, elevations, and sections, and plan obliques of a model on Mylar sheets.