

SYLLABUS



A-2 design studio





A-2 DESIGN STUDIO SYLLABUS OUTLINE

This studio introduces human presence and activity to the abstract formal compositions of the A-1 design studio. Studio projects explore the concepts of linear, planar and volumetric composition. As the projects become more complex, issues of structure, materiality and form are addressed. The term progresses from concept-oriented, limited-issue assignments to more comprehensive explorations, concluding with a final project that incorporates principles considered throughout the studio.

WK	TOPIC	CONCEPT + PRINCIPLES	
1	INTRODUCTIONS	Class Introductions	
2	THE HUMAN PRESENCE	Human Presence, Scale	
3	THE CHAIR STAGE 1	Texture, Materiality and Structure	
4	(THE CHAIR CONT.) STAGE 2		
5	LINEAR COMPOSITION STAGE 1	Composition with Linear Elements Sequential spatial experience Compositional patterns with linear elements Frames, posts, stakes	
6	(LINEAR COMPOSITION CONT.) STAGE 2		
7	PLANAR COMPOSITION STAGE 1	Composition with Planar Elements Qualities of wall Vistas / glimpses Degrees of enclosure	
8	PLANAR COMPOSITION (CONT.) STAGE 2		
9	XYZ PROBLEM STAGE 1	Volumetric Composition Support Enclosure Circulation	Place making Threshold, destination
10	(XYZ PROBLEM CONT.) STAGE 2		
11	(XYZ PROBLEM CONT.) STAGE 3		
12	(XYZ PROBLEM CONT.) STAGE 4		
13	FINAL PROJECT: TEMPORARY STRUCTURE FOR A CEREMONY STAGE 1	Summary Project: Involving 2D and 3D, the designer's eye, and organizing principles. Sub- Problem: Temporary Exhibit Space for One Observer.	
14	(FINAL PROJECT CONT.) STAGE 2		
15	(FINAL PROJECT CONT.) STAGE 3		
16	(FINAL PROJECT CONT.) STAGE 4		

WEEK 1

FIRST DAY OF CLASS

INTRODUCTION

Class members and instructor(s)

SUGGESTED topics of discussion:

Home, educational and work background

Reasons for coming to the BAC

Special skills in design or architecture (Photographic, drafting, construction)

**INSTRUCTOR'S
STATEMENT**

Discussion of teaching methods, course requirements, class conduct, grading criteria, work ethic, etc.

QUESTIONNAIRE

Because of the diversity of the BAC student body, it is useful to get some information from each student. One questionnaire is included here. Feel free to use as is, amend or revise.

**INTRODUCTION OF FIRST
ASSIGNMENT**

1. Problem Description
2. Possible in-class warm up exercises

WEEK 2

THE HUMAN PRESENCE

- PROBLEM STATEMENT** Develop a scale based on your body. Create large studies illustrating the concepts of human presence, size, scale, proportion and their relationships.
- PURPOSE**
- To understand the human figure as the unique standard of measure in interior design and architecture. (Whatever the first impressions of a spectator, ultimately the human figure is the measure of the environment)
 - To study the relationship of the human body to those objects that makes up the environment.
 - To investigate the concepts of SIZE, SCALE and PROPORTION
- TERMS OF CRITICISM**
- Conceptual**
- The meaning and nature of those elements of the human body that are used as a unit or measure
 - The meaning that repetition of the scale element has in the work
- Material**
- Clear and consistent use of size, scale, proportion and their relationships
- SKETCHBOOK**
- Photocopy examples illustrating the relationship of the human presence and scale. Refer to interior design and architectural books and magazines, *National Geographic*, and such.
- Sketch examples of scale and proportion from your environment here in Boston. Prepare a comparative analysis of doors and entrances in Boston.
- Describe some current "unusual" forms of measurement.
- REFERENCE/READING**
- Hall, Edward. *The Hidden Dimension*. New York: Anchor Books, 1969.
- Moore, Henry. *The Human Dimension*. New York: Lund Humphries Pub Ltd, 1991.
- Carroll, Lewis. *Alice in Wonderland*. Morris Plains, NJ: Unicorn Publishing House, 1990.
- Licklider, Heath. *Architectural Scale*. London: Architectural Press, 1965.
- Ramsey, Charles George. *Architecture Graphic Standards*. New York: John Wiley and Sons, 2000.
- Ching, Francis. *Architecture: Form, Space and Order*. 2d ed. New York: John Wiley and Sons, 1996. "Proportion and Scale," pp. 290-330.
- Different, Tilley. *Humanscale 1/2/3*. Cambridge, MA: MIT Press, 1974.
- Muybridge, Eadweard. *Animals in Motion*. New York: Dover, 1957.

STAGE 1
IN CLASS

ASSIGNMENT

Develop a scale based on your hand. Use this scale to measure a piece of furniture in the studio space. Draw the object (freehand) along with the unit of measure (your hand).

Prepare a full-size representation of a measuring system. This measuring system must use the human body as a source of units. Considerations:

- Correspondences between parts of the human body and experience of the designed environment.
- The body in motion.
- Patterns of dimension/ patterns of movement.
- Rhythms/ repetitions of bodily dimensions.
- Ergonomics/behavior/dimension

STAGE 2
IN CLASS

ASSIGNMENT

Review measuring systems.

Design one artifact for which your measuring system is especially appropriate. Include some dimensions according to your system.

Example: Design a facade, a chair, a bicycle, and a pair of glasses.

Scale: YOU!

Materials/color: Broad-stroke media (black charcoal, pastels, or magic marker) on brown wrapping paper.

Materials to bring for next week:

- Study-model building materials
- Chipboard or corrugated cardboard (for model and for cutting surface.)
- X-acto knife and blades
- Metal straight edge

THE CHAIR

PROBLEM STATEMENT

Design and construct a full size, working model of an artifact for sitting that will support your weight. The main surface receiving the weight must be at least 12" from the floor.

Considerations:

- How does an understanding of human presence, scale and proportion impact the design of a chair?
- Will the chair articulate its structure? Does it evidence a structure that is hidden or visible, light or heavy, optimized or redundant?
- How does the choice of construction material impact its form and structure?
- What is the chair's *personality*?
- To what might a chair be analogous?
- How does the design of a chair reflect your evolving attitude toward architecture and interior design?

PURPOSE

To add the concepts of structure and function to the human presence.

TERMS OF CRITICISM

Completion, creativity, construction quality, comfort, coordination of utility with mass and material, form and function, fit.

SKETCHBOOK

Prepare study sketches
Photocopy examples from architectural and interior design magazines.

REFERENCE/READING

Ramsey, Charles George. Architecture Graphic Standards. New York: John Wiley and Sons, 2000.

Reznikoff, S.C. Interior Graphic and Design Standards. New York: Whitney Library of Design, 1986.

Cranz, Galen. The Chair, Rethinking Culture, Body and Design. New York: W.W. Design, 1998.

STAGE 1 *IN CLASS*

Final review: The Human Presence

Introduce Project 2
Begin study models.

ASSIGNMENT

Continue building study models.
Investigate design options in a series of study sketches.

STAGE 2 *IN CLASS*

Review study sketches and study models.

ASSIGNMENT

FINAL CHAIR CONSTRUCTION

Scale: Full size
Materials: Corrugated cardboard. Other paper products by permission of instructor.
Construction: Connections are to be cardboard to cardboard only. No fasteners, bolts, tape, glue, wire, etc. Any tools may be used to cut, shape and form the cardboard.

WEEK 5 + 6

COMPOSITION IN LINEAR ELEMENTS

- PROBLEM STATEMENT** Describe a path through a sloping site, from a point of entry (threshold) to a small pool of water, by means of linear (stick-like) elements only. The path must be characterized by specific spatial events of your own choosing. No element may be higher than 16 feet. The path begins near one corner (the eastern corner) and ends near the opposite corner (the western corner). Use only light, joined construction, framing elements, columns and beams.
- PURPOSE** To examine one fundamental element of formal composition: the linear element.
To explore the making and experiencing of space.
To think with your hands as well as your head.
- TERMS OF CRITICISM** Experiential qualities, including:
- The nature of the path as experienced by persons passing along it.
 - The sequential development of the path.
 - The spatial events along the path.
- Tectonic and formal qualities, including:
- Principles governing use of linear elements.
 - Ordering principles of the overall design considered as entirety.
- SKETCHBOOK** Collect photocopies of interior design and architectural examples of linear compositions. Sketch various studies of linear compositions.
- REFERENCE/READING** Wilson, Peter. Informing The Object, THEMES V. London: Architectural Association, 1986.
- Ching, Francis. Architecture: Form, Space and Order. 2d ed. New York: John Wiley and Sons, 1996.
- Lodder, Christina. Russian Constructivism. New Haven: Yale University Press, 1983. Chapter 1, "Non-utilitarian Constructions"
- Research:
- Vladimir Tatlin, architect, artist, sculptor
 - Gustav Stickley, furniture designer
 - Jain Temples, Dilwara, India

STAGE 1
IN-CLASS

Final Review: The Chair

Discussion

- What part is path? What part not?
- Clearings/ forests
- Spears/ wands/ columns/ trees
- Framing for a view/ the view itself
- Falling elements/ ground (supportive) elements

Begin study sketches (10 thumbnails, minimum).

ASSIGNMENT

Construct Final Site Model

Size: 48' x 48'
Scale: 1/4" = 1'-0"
Topology: 1'- 0" increment level changes upward from East corner to West
Design: the placement and contour of the grade changes
Media: 1/8" Chipboard

Construct Study Models

Build study models of each of the two different schemes for the linear composition, not necessarily to scale.

Study sketches to develop ideas for each scheme.

Media: open but all elements must be of the same material
(Examples: balsa, metal, chipboard, approximately 1/4"=1'-0")

For next week:
Bring model-building materials to class.

STAGE 2
IN-CLASS

Review site models and study models
Discuss linear elements and compositions
Construct study models using additive placement of linear elements

ASSIGNMENT

FINAL MODEL

Use site base and add linear elements, all of same material: balsa, metal, chipboard, or other. Scale 1/4" = 1'-0".

FINAL DRAWINGS

Required: Hard-line drawings including site plan, elevation (1), section (1), axonometric.
Size: 18" X 24"
Scale: 1/4" = 1'-0"
Media: ink or pencil on vellum or mylar sheets

WEEK 7 + 8

PLANAR COMPOSITION

PROBLEM STATEMENT

Describe a hierarchy of spaces and characterize a path with spatial events through a site from a point of entry (threshold) point of exit (threshold) by means of planar elements only. The passageway is defined by the space between planes.

Format: Construct the square site plan.

Size: 48' x 48' with maximum height restriction on the site of 48'

Scale: 1/4" = 1'-0"

PURPOSE

This project examines a second fundamental element - the plane to explore the making and experiencing of space. Think with your hands as well as your mind. This study will introduce consideration of the effect and meaning of light in relation to form making.

In-class discussion

- Moving through, past, over, under walls and planes (floors and ceilings)
- Glimpses versus vistas
- Skyward views along a path
- Openings/ closings/ obstructions
- Canyons/ halls/ slots

TERMS OF CRITICISM

Conceptual

- Clear and consistent representation of organizing principles
- Experiential qualities, such as:
 - the nature of the path as experienced by persons passing along it
 - sequential development of the path; spatial events along the path
 - the quality and use of light

Material

- Tectonic and formal qualities such as:
 - principles governing use of planar elements
 - ordering principles of model considered as entity

SKETCHBOOK

Collect photocopies of examples of planar compositions.
Sketch various planar compositions.

REFERENCE/READING

Wilson, Peter. Informing The Object, THEMES V. London: Architectural Association, 1986.

Ching, Francis. Architecture: Form, Space and Order. 2d ed. New York: John Wiley and Sons, 1996.

Lodder, Christina. Russian Constructivism. New Haven: Yale University Press, 1983. Chapter 1, "Non-utilitarian Constructions"

Research:

- Peter Eisenman, architect
- De Stijl movement

STAGE 1
IN-CLASS

ASSIGNMENT

Final Review: Composition in Linear Elements

Begin study sketches (10 thumbnail schemes, minimum)

Construct Final Site Model

Format: The site is flat.
Size: 48'-0" x 48'-0"
Scale: 1/4" = 1'-0"
Material: 1/8" Chipboard

Study Models

Build two study models of planar composition, not necessarily to scale
Note: the maximum height restriction on the site is 48'-0"

Media: all planes must be constructed of the same material
(examples: museum board, balsa, metal, or chipboard)

Discuss planar elements and compositions in class.

STAGE 2
IN-CLASS

ASSIGNMENT

Review study models/schemes.

FINAL MODEL

Use last week's final site model as base and add planar elements, all of same material:
balsa, metal, chipboard, or other.

Scale: 1/4" = 1'-0".

FINAL DRAWINGS

Required: Hard-line drawings of site plan; elevation (1), section (1); axonometric.
Size: 18" X 24",
Scale: 1/4" = 1'-0".
Media: ink or pencil on vellum or mylar sheets

WEEK 9, 10, 11 & 12

XYZ PROJECT

PROBLEM STATEMENT

Construct a series of spaces within a cube. Begin by building a spatial framework (as described below). Within this framework, and using coherent systems of structure, enclosure and circulation, generate several particular spaces in the model. There are no specific functions for the spaces in the cube beyond those described below.

Definition of the Cube

The cube is divided at midpoints by three planes; one horizontal and two vertical (at right angles) that generate eight equal cubes within the larger volume - the "rooms" of the model. While designing the transformation of the cube, all eight sub-cubes must have a clear presence in the final design.

Color code:

- Black for structure
- Gray for enclosure
- White for circulation, horizontal or vertical
- Chipboard color for site

Circulation

Establish a circulation path through the model that passes through all of its sub-cubes. The circulation path starts at defined points outside the cube (see drawing). Because the circulation path connects both levels, indicate both vertical and horizontal circulation.

Threshold

Clearly indicate the threshold, marking the primary beginning point of the circulation.

Destination

Establish a point of arrival or destination within the cube.

Site

The cube sits in/on a sloped site (see drawing).

Entrances

There are two points of access to the cube, one on the upper level and one on the lower level (see drawing). Establish one as the threshold.

Considerations

- What if the walls were thick enough to be stairs?
- How does the BAC building encode structure, circulation?
- Space and form can collapse or expand.
- Rhythm, enclosure, structure, and scale can have measure and can vary.
- Sequential experience can be diagrammed, reinforced.
- Simplify or add complexity.
- Parameters may be modified in small ways, but only in the service of specific intentions.

PURPOSE

To study:

- Circulation/Support/Enclosure
- Threshold/Arrival
- Spatial Systems/Axiality/Diagramming

TERMS OF CRITICISM

Use the framework to create coherent systems of structure, enclosure, and circulation

SKETCHBOOK

Study circulation options with sketch and diagrams.

REFERENCE/READING

Ching, Francis. Architecture: Form, Space and Order. 2d ed. New York: John Wiley and Sons, 1996.

STAGE 1
IN-CLASS

Final Review: Planar Composition

Begin conceptual models and develop freehand versions of the final drawings. Pin-up and discuss.

ASSIGNMENT

Conceptual Sketches

Prepare sketches/diagrams illustrating at least four schemes for the project.

Two Concept Models

Select two of the four schemes for further study. Using black, white and gray, construct two small concept models addressing all aspects of the project. Use appropriately colored board to indicate structure, enclosure and circulation. The concept model is not to scale but must represent the site as well as the structure.

STAGE 2
IN-CLASS

Review four schematic drawings and 2 schematic models
Discuss editing work

ASSIGNMENT

Select Scheme to Design

The XYZ framework can now undergo shifts and transformation. Planes can become frames or volumes. Elements can be displaced or extended. Rework the models and sketches. Clarify the parts, delete what is unnecessary and refine the essential. Rethink concepts and distill feedback. Rebuild the concept model to the final model scale.

Drawings: Preliminary drawings to scale.
Scale: $\frac{1}{4}'' = 1'0''$

STAGE 3
IN-CLASS

Review model and drawings
Discuss expectations for final review

ASSIGNMENT

Final Model

Scale: $\frac{1}{4}'' = 1'-0''$
Size: Large cube: 24'- 0" per side (the final model will be approximately 6" x 6" x 6")
Materials: Site - Chipboard
Structure - Artist board, black; solid color core
Enclosure - Artist board, solid core gray
Circulation - White cardboard or heavy weight paper; solid color core

Final Drawings

Required: 2 plans, 2 sections, 2 elevations and 1 site plan.
Optional: Axonometric
Size: 18" x 24"
Scale: $\frac{1}{4}'' = 1'-0''$
Media: Ink or pencil on mylar sheets

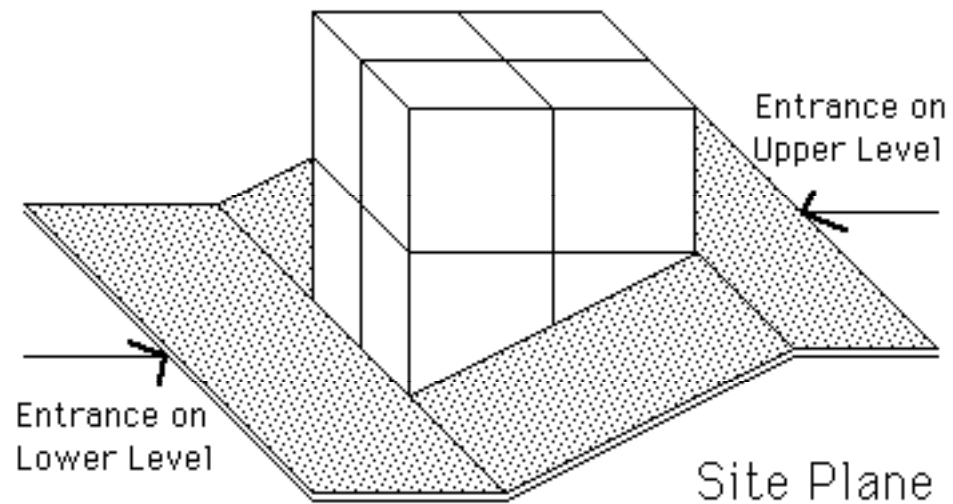


Diagram of Site Model

TEMPORARY STRUCTURE FOR A CEREMONY

PROBLEM STATEMENT

Design a structure to accommodate a ceremony of your own choosing/design. The structure is to embody the spirit of your ceremony and fulfill the program requirements you have outlined. The following requirements must be met:

- The ceremony must encounter both form and space.
- The structure must be readily adaptable to a variety of sites.
- The structure must be temporary and transportable, easy to set-up and to take down.

Sense of place: Consider the qualities of built and natural environments that support, complement and enhance human activities.

Ceremony: A formal act or series of acts; rite; observing prescribed procedures.

Ritual: An act or series of actions imbued with meaning; a prescribed order of acts that govern conduct.

Temporary: Lasting only for a time; impermanent; transitory.

Parti diagram: A diagram of the overall formal nature of the project, drawn in plan view.

PURPOSE

To explore the connection between activity and the place of activity.

TERMS OF CRITICISM

Experiential qualities, including the:

- Effectiveness of the landscape and interior/architectural space for the ritual.

Tectonic and formal qualities, including the:

- Use the framework of this assignment to design a coherent temporary structural system.

SKETCHBOOK

Sketch artifacts that are used in your Rituals/Ceremonies

REFERENCE/READING

The Princeton Architectural Journal, Volume I. New York: Princeton Architectural Press, 1992.

Research:

- *Editorial* by Julia Bourke, pp 5 – 6
- *Water Folly* by Gustavo Bonevardi, pp 167- 169
- *The Japanese Tea Ceremony*

STAGE 1 *IN-CLASS*

Final Review: XYZ Project

Discuss the concepts of ritual and ceremony.

ASSIGNMENT

Describe your ceremony

Describe the primary requirements of the ceremony, including spaces, their functions, and the movements or processions of the participants. Consider the approach to and the arrival at the ceremony structure. (100 words maximum)

Concept development

Construct a concept collage or model.

Draw one concept sketch and one parti diagram. Not to scale.

Materials to bring to next week's class:

Black, white and gray board material, for construction of a concept model.

STAGE 2
IN-CLASS

Pin-up Review

Using black, white and gray board material, begin a concept model of the Interpretive Center.

ASSIGNMENT

Site Model Base

Create a site model base for the concept model. Design the site as an active, integral part of the ceremony. Consider approach, arrival and progression/procession through the site.

Concept Model

Use black, white and gray to code structure, movement and enclosure. You may use chipboard as the color gray.

STAGE 3
IN-CLASS

Desk Crits

Review concept Models
Review 3D axonometric representations

ASSIGNMENT

Model

Revise the model
Consider the elements on the site as an ensemble
Scale: $\frac{1}{4}'' = 1'-0''$

Drawings

Prepare preliminary drawings of the temporary structure for the ceremony.
Consider how the structure is assembled.
Develop an axonometric "kit of parts" drawing to demonstrate how the structure is assembled

Required: Site Plan, Plans, Sections, Elevations, and Axonometric.
Scale: $\frac{1}{4}'' = 1'-0''$

STAGE 4
IN-CLASS

Discussion

- Preparing for a final presentation.
- Thinking ahead to Segment I Portfolio Review.

ASSIGNMENT

Final Model

Scale: $\frac{1}{4}'' = 1'-0''$

Final Drawings

Required: Site Plan, Plans, Sections, Elevations, and Axonometric.
Size: 18"x24"
Scale: $\frac{1}{4}'' = 1'-0''$
Media: Ink on mylar sheets