

Spring 2005	Arch 102	Design
Class Credits:	5	
Type of Course:	Required Studio	
Class Meetings:	MTH 2PM-6PM	
Prerequisites:	Arch 101	
Enrollment Capacity:	15	
Instructor / Section and Location:	Arch 102.01 Cathy Jones	MTH 2pm-6pm HHS 415
	Arch 102.02 Erich Schoenenberger	MTH 2pm-6pm HHS 515
	Arch 102.03 Daniel Silver	MTH 2pm-6pm HHS 515
	Arch 102.04 Yael Erel	MTH 2pm-6pm HHS 515
	Arch 102.05 Kari Anderson	MTH 2pm-6pm HHS 415
	Arch 102.06 Jeremy Carvallo	MTH 2pm-6pm HHS 415
	Arch 102.07 Eric Goldemberg	MTH 9am-1pm HHS 515
	Arch 102.08 Eric Wong	MTH 2pm-6pm HHS M10
	Arch 102.09 Jonas Coersmeier	MTH 2pm-6pm HHS 314

Course Overview

Three consecutive and interrelated phases of a design process guide the coherent development of a small-scale architectural project. Each phase focuses on the notions of time and transformation in conceptual, structural, organizational and spatial terms. This distinct emphasis supports a unifying analytical and creative framework for increasingly complex architectural interventions. Analytical and experimental drawing techniques and model building inform and represent the transition from concepts into sophisticated and developed spatial designs.

Project Descriptions

3 projects will measure the performance of Ground within structural, temporal and spatial dimensions.

1

Performance Grounds are spatial modules generated thru a time-based analysis.
 A ritual of desire embodies detail.

2

The joining and regeneration of modules generate a Back Ground.
 This landscape is a structural matrix of topological variation.

3

Meeting Ground proposes a critical exchange between body, space and phenomena.
 An event structure seeks to extend and / or challenge the authority of the matrix, the established ground.

Methods of Assessment/Grades

- Each studio critic will determine his/her own standards of assessment based upon the following:
- Attendance, class participation, and weekly assignments: 20%
- Project 1 completion: 25%
- Project 2 completion: 25%
- Project 3 completion: 30%

Learning Objectives

This course fulfills the following NAAB requirements:

- 5. Fundamental Design Skills: Ability to apply basic organizational, spatial, structural and constructional principals to the conception and development of interior and exterior spaces, building elements, and components.
- 16. Formal Ordering Systems: Understanding of the fundamentals of visual perception and the principles and systems of order that inform two and three dimensional design, architectural composition, and urban design.

Additional pedagogical objectives include:

- Understand that a thoughtful architectural proposal is based on a coherent design process.
- Engage in rigorous research and analysis that incorporates knowledge from a variety of institutional resources to support an interdisciplinary design approach.
- Translate concepts of gradually increasing sophistication into meaningful spatial design.
- Explore and evaluate concepts in a creative and critical manner with respect to their relevance in generating intelligent, inventive design solutions.
- Exercise basic organizational, spatial, structural and constructional principles to conceive and develop interior and exterior spaces, architectural elements and components.
- Employ principles of structural behavior in withstanding gravity and lateral forces
- Select, configure and detail parts of the design proposal to assess performance and aptitude.
- Recognize the spatial implications of a design proposal at varying scales and in different contexts.
- Speak and write effectively about each project and its design process.
- Utilize appropriate representational media, to examine and convey the development of a spatial idea and its translation into an architectural statement.
- Function in a collaborative environment, assuming varying roles as required to maximize the individual's contribution to the group.

Course Requirements

- Regular attendance in class and lectures: As per Institute rules, (3) three unexcused absences will result in an automatic failure of the course. Developmental drawings, models and supporting documentation are required for each class. Attendance and participation in midterm and final presentations are required. Successful completion of midterm and final project requirements and reviews is required and no make-up or postponed project submissions will be accepted except in the case of unforeseen circumstances and emergencies. Excused absences and project delays must be officially cleared, by professor, in advance, in order to be considered valid.
- Working in the studio is Mandatory.
- Timely completion and presentation of three projects, including written project descriptions, scaled and measured drawings, such as plans, sections, elevations, and models as assigned for each project by studio instructor.
- Research and analysis of pertinent scientific, artistic and architectural precedents in response to each project's requirements to enrich and ascertain a coherent conceptual, schematic and spatial investigation.

Cultural Model

- This section should be focused and framed by the specific instructors; i.e. each instructor would introduce a cultural knowledge or 'topic' in the studio from which a series of researches, readings, studies, would introduce the student to a specific 'model of thought'. Some examples of a cultural knowledge could include, literary models, scientific models, mathematical models, language models, philosophical models, and musical models.

Bibliography

- Adams, Colin C. [The Knot Book](#) (W H Freeman and Company, New York, 1994)
- Allen , Stan [Points and Lines](#) (Princeton Architectural Press, 1999)
- Bachelard, Gaston [The Poetics of Space](#) (Boston: Beacon Press, 1994)
- Balmond, Cecil [Number 9: The Search for the Sigma Code](#) (Prestel, July 1, 1998)
- Bloom, Howard [Global Brain](#); Wiley; New Ed (September, 2001)
- Corner, James [Recovering Landscape](#) (Princeton, 1999)
- De Landa , Manuel [A Thousand Years of Nonlinear History](#) Zone Books (November 1997)
- deCerteau, Michel [Practice of Everyday Life](#)
- Engel, Peter [Folding the Universe](#), (Random House, NY, 1989)
- Fuller, Buckminster [Synergetics](#)
- Heidegger, Martin [Poetry, Language, Thought](#) (Harper and Row, 1971)
- Holl, Pallasmaa, Perez-Gomez [Questions of Perception](#) (AU)
- Kandinsky, Wassily [Point and Line to Plane](#) (New York: Dover Publications, 1979)
- Klee, Paul [Pedagogical Sketchbook](#) (Farrar, Straus, & Giroux, 1968)
- Krause and Lichtenstein [Your Private Sky](#) (Lars Muller Publishers 1999)
- Kwinter, Sanford [Architectures of Time](#) (MIT, 2002)
- Spuybroek, Lars [Nox: Machining Architecture](#) (Thames and Hudson 2004)
- Tufte , Edward R. [Envisioning Information](#) (Graphics Press Cheshire, CT,1990)
- Weeks, Jeffrey R. [The Shape of Space](#) (Marcel Dekker, Inc., New York, 2002)
- Van Berkel, Ben [Any 23- Diagram Work](#) (Anyone Corp, 1998)

PROJECT #1 Performance Grounds

Project Description

Performance Grounds are spatial modules generated thru a time-based analysis.

A ritual of desire embodies detail.

"The Movements – of crowds, dancers, fighters – recall the inevitable intrusion of bodies into architectural spaces, the intrusion of one order into another. The need to record accurately such confrontations, without falling into functionalist formulas suggested precise forms of movement notation. An extension of the drawn conventions or choreography, this notation attempts to eliminate the preconceived meaning given to particular actions in order to concentrate on their spatial effects: the movement of bodies in space. Rather than merely indicating directional arrows on a neutral surface, the logic of movement notation ultimately suggests real corridors of space, as if the dancer has been carving space out of a pliable substance: or the reverse, shaping continuous volumes, as if a whole movement has been literally solidified, 'frozen' into a permanent and massive vector."

Bernard Tschumi, The Manhattan Transcripts

Research Ritual

- Diagramming
- Dance Notation
- Research Cultural Model (as assigned per studio instructor)

Means

- Diagram/ Notate rituals thru time
 - 01.1 Analysis
 - a. Cultural Model
 - Select a ritual of desire
 - b. Animate Form
 - Generate a series of analytical drawings that make visible the deeper conceptual logic intrinsic to the time-based event - (3) recordings 18"sq
 - c. Word Games
 - Establish a privileged word set
- Translate this notation as an assembled module
 - 01.2 Analogical models
 - Tectonic Expressions
 - Create a series of skin / skeleton modules that contain a variation of spatial effects - (1) type / (3) variations min.

Materials

- Paper (study models)
- Basswood (final grounds)

Issues

- Consider the module as a structural seedling
- Consider the spatial properties (type/ character)
- Consider the material properties (type/ character)

Tectonic Rules

- Module limit: 3"w x 3"d x 6" l
- Scale: 1/8" = 1'-0"
- Glue may be used to build up custom sections that remain permanently fixed
- All elements will be derived from ruled surfaces
- Measure/ Modulate all components (example 1/4" module)

Requirements

- A minimum of (1) time based drawing showing a series of transformational positions
- 3 Final Ground Model in basswood (minimum)
- Integrate Photography (analytically in addition to representation)

PROJECT #2 Back Ground

Project Description

The joining and regeneration of modules generate a Back Ground. This landscape is a structural matrix of topological variation.

"Editing is ultimately no more than the ideal variant of the assembly of the shots, necessarily contained within the material that has been put onto the roll of film. Editing a picture correctly, competently, means allowing the separate scenes and shots to come together spontaneously, for in a sense they edit themselves; they join up according to their own intrinsic pattern. It is simply a question of recognizing and following this pattern while joining and cutting. It is not always easy to sense the pattern of relationships, the articulations between the shots, particularly if the scene has been shot inexactly, in which case you will have not merely to join the pieces logically and naturally at the editing table, but laboriously to seek out the basic principle of the articulations. Little by little, however, you will slowly find emerging and becoming clearer the essential unity contained within the material.

In a curious, retroactive process, a self-organizing structure takes shape during editing because of the distinctive properties given the material during shooting. The essential nature of the filmed material comes out in the character of the editing."

Andrey Tarkovsky, Sculpting in Time

Research

- Datum
- Reading (as assigned per studio instructor)
- Research Cultural Model (as assigned per studio instructor)

Means

- 02.1 Constructed Field
 - a. Structural Matrix
 - Utilizing the inherent principles in the unit module, develop an extended structural matrix containing topological variation
 - b. Between Building + Land-Scape
 - Generate a series of time-based drawings highlighting the performative logic of the thickened surface

Materials

- Paper and foam (study models)
- Basswood (final model)

Issues

- Establish datum
- Consider the assembly as a tectonic landscape.
- Consider the spatial and structural consequences of rescaling the module.
- Consider the space in between elements
- Consider the datum of the horizon (above/ below)
- Limit and Prioritize Systems

Volumetric Parameters

- Module limit: 18"w x 18"l x 6" d
- Scale: 1/8" = 1'-0"

Tectonic Rules

- Glue may be used to build up custom sections that remain permanently fixed
- Mechanical fasteners of any kind may not be used

Requirements

- 2 horizontal sections (plans), scale 1:1 of model scale
- 2 (min) longitudinal and latitudinal sections, scale 1:1 of model scale
- 1 final site model in basswood

PROJECT #3 Meeting Ground

Meeting Ground proposes a critical exchange between the body, space and phenomena.

An event structure seeks to extend and / or challenge the authority of the matrix, the established ground

"The authenticity of Architectural experience is grounded in the tectonic language of building and the comprehensibility of the act of construction to the senses. We behold, touch, listen, and measure the world with our entire bodily existence and the experiential world is organized and articulated around the center of the body. Our domicile is the refuge of our body, memory and identity. We are in constant dialogue and interaction with the environment, to the degree that it is impossible to detach the image of the self from its spatial and situational existence. "I am the space, where I am," as the poet Noel Arnaud established.

Juhani Pallasmaa Questions of Perception

Research

- Reading (as assigned per studio instructor)
- Research Cultural Model (as assigned per studio instructor)
- Occupation, Experience, Phenomena

Means

- 03.1 Intervention
 - a. Program
Invent the terms of programmatic arrival. Propose an event structure that seeks to extend and / or challenge the authority of the existing matrix
 - b. Body
Establish a critical correspondence between the body ritual, natural phenomena and the spatial development of the architecture.

Materials

- Paper and foam (study models)
- Basswood (final)
- Plexiglass

Volumetric Parameters

- Building limit: 1500sq ft total (enclosed)

Issues

- Qualify spatial sequence as experienced (ex. Light)
- Address Enclosure (implicit/ explicit)
- Consider the transgression of the horizon datum (above/ below)

Requirements

- Model + Drawing Types:
 - A Site Plans @ 1/8" = 1'-0"
 - B Building Plans and Sections @ 1/4" = 1'-0"
 - C Wall sections @ 1/2" = 1'-0"
- Sketches and preliminary drawings as required, save all your previous work
- 1 axonometric drawing: sectional or exploded
- Sketch models in various materials, save all your previous work
- Final models in Basswood

Semester Schedule

January

Week 1	01/17 01/20	Monday Thursday	MLK Day-No Class Project #1	Issued:	Performance Grounds
Week 2	01/24 01/27	Monday Thursday	In class review In class review		
Week 3	01/31	Monday	In class review		
<u>February</u>	02/03	Thursday	In class review		
Week 4	02/07 02/10	Monday Thursday	In class review In class review		
Week 5	02/14 02/17	Monday Thursday	Project #2 Project #2	FINAL REVIEW Issued: FINAL REVIEW Issued:	Performance Grounds Back Ground Performance Grounds Back Ground
Week 6	02/21 02/24	Monday Thursday	In class review In class review		
Week 7	02/28	Monday	In class review		
March	03/03	Thursday	In class review		
Week 8	03/07 03/10	Monday Thursday	In class review In class review		
Week 9	03/14 03/17	Monday Thursday	Project #3 Project #3	FINAL REVIEW Issued: FINAL REVIEW Issued:	Back Ground Meeting Ground Back Ground Meeting Ground
Week 10	03/21 03/24	Monday Thursday	Spring Break Spring Break		
Week 11	03/28 03/31	Monday Thursday	In class review In class review		
Week 12	04/04 04/07	Monday Thursday	In class review In class review		
Week 13	04/11 04/14	Monday Thursday	In class review In class review		
Week 14	04/18 04/21	Monday Thursday	In class review In class review:		
Week 15	04/25 04/26	Monday Tuesday		FINAL REVIEW FINAL REVIEW	Meeting Ground Meeting Ground