

ARCH 5516 • LUMINOUS AND THERMAL DESIGN ECOLOGICAL DESIGN FOR THE 21ST C



*"Nature has been for me, for as long as I can remember a source of solace, inspiration, and delight; a home, a teacher, a companion."
- Lorraine Anderson, Sisters of the Earth (1991)*

*For the artist, communication with nature remains the most essential condition. The artist is human ... part of nature within natural space.
- Paul Klee*

*"I have stopped sleeping inside. A house is too small, too confining. I want the whole world, and the stars too."
- Sue Hubbell, A Country Year (1986)*

PROJECT TWO: PHASE 1: LIGHTSCAPES: The Nature of Light

Due: Wednesday, January 30, pin-up by 9:45 on the mezzanine (reviews begin at 10:00)

(Phase 1 studies: suggested time limit: 1/2 day)

*"Nature is everywhere. It affects and can be found in every inquiry of creativity. Many of the emotions generated by nature are intangible: the changes of the hour, the passage of time as seen through the colors of the elements, the filtering of light through the clouds, the moon and the sunset. Nature influences many channels of architectural creativity. It is ever-present and unclassifiable, powerful inspirationally and as a tool."
-- Anthony Antoniades, The Poetics of Architecture*

Procedure: Defining a Desired Quality of Light: 1/16" sectional physical study models

Objective: To investigate the relationship between the quality and character of the luminous experience and the section, envelope, and window form.

In Phase 1 we will use visual images from nature to explore the mood, feelings, and character of light in space. Each member of the team is asked to find ONE image from nature, which captures a powerful or meaningful luminous experience appropriate for your current design concept(s). This image (or images) will be used as a point of departure for your first daylighting study. You are asked to develop THREE different 1/16" physical models that interpret the quality of light into the "building section/envelope." Use the luminous phenomenon found in the image to inspire your design thinking in section. Please include a base model with old Rapson Hall to study the relationship between your new design intervention and the old. These will be 1/16" sectional study models (select a sectional cut of the building to reveal the power of light in space).

1. Define a desired quality of light that could inform your design concept(s): In this study you will be exploring the qualitative effects of light in space. Work together as a team to select one (or a few) evocative image of a luminous phenomena in nature that could inform the quality and character of light in your proposed addition. What character and quality of light do you want to create? Consider the mood, emotional response, essential character of the light, and what physical factors create the luminous experience (i.e. the direction of light, how it is filtered, the pattern, color, or intensity, etc.). Identify words to define the quality of light (e.g. brilliant, soft, filtered, mysterious, quiet, exuberant, etc.) Please use the image and word(s) to inform your design explorations in section.

2. Sectional Experimentations: 1/16" physical study models: Each team member is asked to develop at least THREE "sectional interpretations" for your "addition" which are inspired by the essential luminous qualities of the image from nature and the corresponding words to define the quality of light. *Photograph your models for your final Project One Presentation.*

Mystery
Celebration

In this exercise focus on the *quality of light and the attributes of the section and envelope*, including the size, position, shape, and detailing of the building skin and "window(s)." *Use appropriate model materials to explore the section and building envelope (balsa, wire, mesh, translucent materials, metal, etc.). Please consider:*

Silence
Joy

- Spatial volumes and sequencing of volumes inside to outside
- Layering and/or character of the envelope and materials inside, at the window, or outside.
- Position of windows and size and distribution of windows.
- Window form and detailing to influence the quality of light (i.e. 2-D, 3-D, slots, slivers, walls of glazing, punched opening, deep reveals, etc.).
- Role of shadow as well as light

Calm
Compassion

3. Annotated 1/16" Sections and Critique: Please develop one annotated section (at 1/16" scale) for each of your three design proposals to illustrate your design concepts, desired qualities of light, and intentions (what did you do and why?). Include a brief bulleted summary of your design intentions and lessons (strengths, weaknesses, what you would like to develop further).

Clarity
Wisdom

4. Informal Pin-up: Please pin-up the following by 9:45 on Wednesday, January 30:

- your images of nature, related words
- annotated sections and critique
- section models

Reflection
Connection
Renewal

Meditation
Rest

Grading Criteria:

Project One: Phase 1: 10% total grade (100 points)

60%: Clarity and execution of design intention

40%: Craft and quality of design proposal

Inspiration
Balance

Community
Clarity

Reverence
Time

Seasons
Cosmos