

Course Number and Title: ARCH 156 / Graphic Communications I / 3.0 Credits

Instructor: Paul Schultz

Contact: pschultz@resul.tech.com

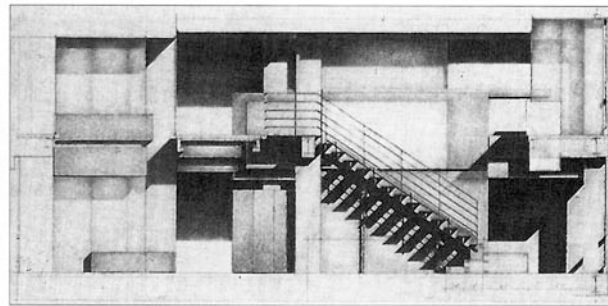
Website: www.thedraftedline/teaching

PROJECT 2: Rendering Space and Form with Light

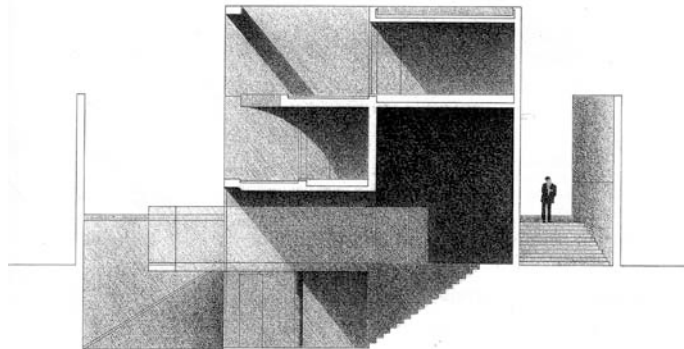
The physiological and psychological effects of light (and its companions, shade and shadow) are important considerations in the design of most spaces. Whether light is artificial or natural, direct or ambient, architects rely upon this temporal feature to enliven static spaces, draw occupants in and around, and create drama through the definition of form and definition of fore-, middle- and background spaces.



Ink wash section, Richard Morris Hunt, Circular Stair, 1846



Drawing: The Stainless Steel Apartment, Chicago, Illinois
36" x 24" (91.4 x 61 cm), Scale: 1/2"=1'-0"
Medium: Colored pencil
Courtesy of Krueck & Sexton, Architects, and
Ludwig Mies Van der Rohe, Building Architect



Drawing: I Gallery, Tokyo, Japan
429 x 297 mm (16.9" x 11.7"), Scale: 1:100
Medium: Colored pencil on the copy of the inked drawing
Courtesy of Tadao Ando, Architect

Assignment 1, due 1/12/10 (Section 1) or 1/14/10 (Section 2)

In graphite, draft a *partial plan* and the corresponding *longitudinal section* on a sheet of drawing-quality paper using appropriate line weights. Orient the page vertically; draft at 1/8"=1'-0" scale; include a north arrow. Align the plan and section accordingly on the page, using the layout you used as an underlay for the diagramming exercise as a guide.

The drafting of this assignment must be complete by the start of next week's class to begin work on the next portion of this project. Refer to drafting techniques and conventions as outlined in *Design Drawing*, 1998 ed., Floor Plans pp. 136 – 142 and Building Sections, pp. 154 - 161 (*Note: do not poche walls in plan on section*).

Assignment 2a, begin in class Week 2, due 1/19/10 (Section 1) or 1/21/10 (Section 2)

- Construct the location of shade and shadows on *trace paper as overlay drawings in section* for next week, using the technique of shade and shadow projection discussed in class.
- You may draft an additional *reference cross-section* on trace paper to aid in shade and shadow construction.
- Assume a sun altitude of 45-degrees and a bearing (azimuth) angle of 45-degrees to the southwest.
- Refer to *Design Drawing* pp. 164-171, "Shade and Shadows."

Assignment 2b, begin in class in Week 3, due 2/2/10 (Section 1) or 2/4/10 (Section 2)

- After reviewing your work with your instructor, transfer the constructed shadow projections to the final drawing.
- Render shade and shadow using the technique of *rendered tone (hatch, cross hatch or smooth tonal rendering)*.
- Use different tonal values to convey depths: *foreground objects are lighter, background objects are darker*.
- Hand-letter your name and the drawing title on the final drawing be prepared to present it in class next week.

Assignment 3, complete in class Week 3, 1/19/10 (Section 1) or 1/21/10 (Section 2)

Supplies to bring to class in Weeks 3&4:

Black and white paper, prismacolor pencil set sharpened, sharpener, sturdy 12"x18" surface to lean on while drawing.

Assignment:

- Observe the chairs set up in the classroom.
- Using dark media (charcoal or colored pencil) on white paper, draw the effect of shade as it reveals the form of the chairs. Use techniques of hatch, cross-hatch and tonal rendering to depict the qualities of the materials' reflectivity and luminosity.
- Repeat the exercise using light media (white pencil) on dark paper, looking for the effects of light as it, too, reveals form.



Assignment 4, complete in class Week 4, 1/26/10 (Section 1) or 1/28/10 (Section 2)

Class will meet at the Main Building and walk together to Fischer Fine Arts Library Main and Rotunda Reading Rooms on the University of Pennsylvania campus. Do not arrive to class late!

Inside the Reading Rooms of the library complete the following:

- Observe the effects of light and shadow on the space and the objects within it.
- Select two details from the architectural elements observed. One detail should be selected because of the effects of *light* on its form; the other detail should be selected due to effects of *shade*.
- *Note: Do not draw the outline of the object – instead, build the detail from rendering only.*
- The "shade" detail must be drawn freehand on white paper in dark media and the "light" detail on dark paper in white media. Draw each detail at a large scale such that they fill each page.
 - Build each component of the detail separately, looking at the *shape* of light or shade
 - Use relative proportions of elements to recreate each detail on the page
 - Use geometry to aid in establishing alignments between elements
- Rendering must be carefully executed and may utilize hatch, cross hatch and smooth rendered tone.
- Keep your pencil sharpened to maintain control of the drawing.
- **Week 5: All work on Project 2 is due (bring it to class), 2/2/10 (Section 1) or 2/4/10 (Section 2)**
- **Week 5: Class will meet at the Bossone Bldg (3141 Market) at 7pm, 2/2/10 (Sect. 1) or 2/4/10 (Sect. 2).**
- **Build a viewfinder and bring it to class in Week 5 with pencils and your sketchbook!**