

Architecture Studio: 2nd Year

Fall 2010, CMU, Arch #48-200, M/W/F 1:30-4:20
Class Website: www.andrew.cmu.edu/course/48-200

Coordinator: Kai Gutschow
Email: gutschow@andrew.cmu.edu
Off. Hr: M/W 12:30-1:30pm & by appt. in MM202

(6/23/10)

SUMMER ANALYSIS: COURTYARD BUILDINGS

MINDSET

The single most important source, and tool, for learning about architecture, is architecture. Experiencing and analyzing (good) buildings in person, and over an extended period of time, remains the best way to understand the complex art we call architecture. When travel is not possible, acquiring deep understanding through research of drawings, photos, and text becomes an essential skill for all architects.

The goal of this assignment is to build on 1st year work analyzing the work of Le Corbusier, Kahn, and others, and to help prepare you for the upcoming 2nd year "Composition" studio by expanding your understanding of iconic works of modern architecture. Your mission is to discover the underlying compositions and resultant experiences of assigned courtyard buildings, and communicate them through clear, abstract, analytical, and interpretative diagrams.

In this assignment, particular emphasis should be placed on the courtyard, terrace & garden space(s) within each building. Think about how and why a courtyard(s) was inserted into the project? Analyze the relationship between solid and void, between space, structure, enclosure, and mass as the basis for composition. Seek to understand WHAT the architect intended with the overall design and each detail, and WHY the architect "composed" it that way, and create analytical diagrams to show it.

RESEARCH WORK & ANALYSIS PROCESS

Each of you should analyze six (6) courtyard buildings (see p.2 for lists). Locate any resources you can access about your buildings, including at libraries, bookstores, and the internet (see more on this below). Find multiple sources! Be sure to find a detailed plans and detailed sections of each building.

Take LOTS of (visual) notes in the form of sketches (avoid words). Sketch the design and composition of the buildings. Also consider using *Sketchup* or similar to model it in 3D, or make an analytical physical model.

Focus on the courtyard/terrace/garden. How do the exterior spaces relate to interior spaces? How do they relate to the street? How is it oriented to the sun? If there are multiple courtyards, how do they relate to each other? How do the courtyards in one house compare to others. Look at ground level changes, the ceiling, and especially the roof. Investigate your buildings at different scales, from construction details and materials, to major axes and site context, and how they all reinforce each other. Imagine yourself approaching the building, walking through it, and how all your senses would be stimulated by both the space and the material structure, especially in the courtyard.

Search for compositional "principles" in order to discover the architectural "language," and the arrangement of important spaces and architectural elements (entry, walls, thresholds, openings, courtyards, geometry of spaces, circulation, poche, gardens, etc). Then go beyond, by focusing on the materiality of the architecture that creates spaces and experiences through structure and mass. What is it made of? Is it a "load-bearing wall" made by piling up materials, or a "skeletal" system made of inter-connected vertical posts and horizontal beams? How does the geometric configuration of the structural system affect spatial experiences and movement through the building? Why?

This process takes time, effort, and focus: start early, work iteratively, over time.

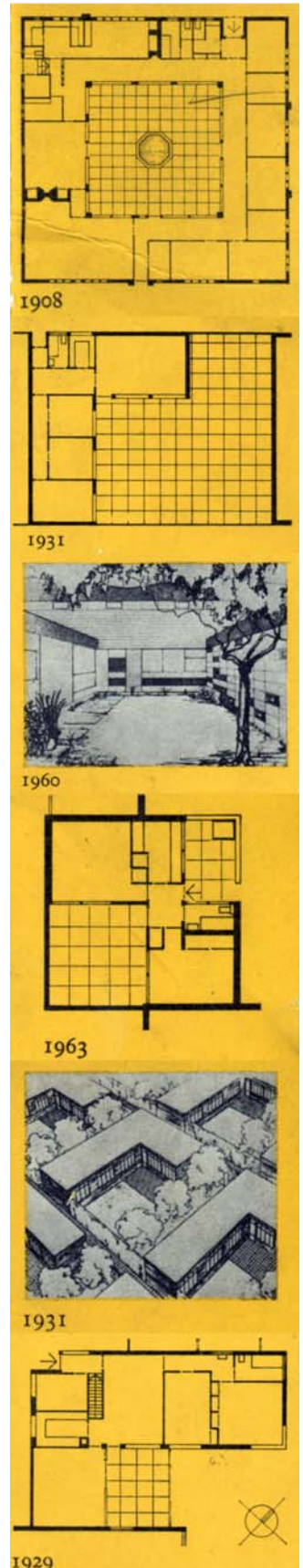
ASSIGNMENT: DUE: Mon. Aug. 23, 2010, 1:30pm

1) Using a soft but sharp wood pencil, create *freehand, but precise* drawings of the main *floor plan(s)*, major *section(s)*, ingenious *material details* that enhance the effect of the courtyard, and how they relate to each other. Avoid simple "views" or perspectives. Do NOT trace or copy plans or photos.

2) Then create a series of inventive, abstract diagrams to reveal the ideas and experiences, being sure your representation reinforces the ideas. Determine the clearest way of representing the unique composition and architect's intent, especially with regard to the courtyard(s) of each of your buildings. Work to invent clear, abstract, analytical diagrams explaining your findings.

3) Carefully select, edit, and *compose* the most informative drawings & diagrams (plan, section & elevation of courtyard req'd) for each building onto a separate, landscape-oriented, 8.5"x11" page (1 building/page)

...cont'd...



- 4) Create a cover sheet with your name, and add one interpretative diagram of each building to the cover, so that one can compare and contrast the compositions of the courtyard buildings, and one begins to see the variety that is possible within the courtyard building type.
- 5) Scan all pages (minimum of 6 buildings + cover), and create a single medium-resolution, multi-page pdf file named: "lastname_summer study" (max 2MB; those with same last names, add first initial to name).
- 6) Submit pdf to archpcserver 2nd Year Studio folder: [\\Archpcserver.andrew.ad.cmu.edu/studios/48-200](http://Archpcserver.andrew.ad.cmu.edu/studios/48-200)
- 7) Submit a high quality hard copy of all pages (stapled!) to the 2nd year coordinator on the first day of classes, Mon. 8/23/10.

BUILDING SELECTION

Briefly look at ALL the buildings in the list below, then analyze in detail AT LEAST 6 BUILDINGS assigned to your last name according to the directions on the previous page. You MUST do the first three in your list, and you can choose three more from the last five choices (do more for extra credit):

- | | |
|-------------------------------------|---|
| Students with last names A-H | <ol style="list-style-type: none"> 1. Typical ancient Roman Atrium House, Italy (e.g. Pompeii) 2. Borromini, Courtyards of San Carlo alle Quattro Fontane Church, Rome, Italy, 1638 3. Jorn Utzon, Bakkedraet Housing, Fredensborg, Denmark, 1962 4. Ludwig Mies van der Rohe, Lemke House, Berlin, Germany, 1932 5. Tadao Ando, Azuma House (or Row House in Sumiyoshi), Tokyo, Japan, 1976 6. Studio Junction, "Courtyard House," Toronto, 2006 7. Souta de Moura, Row Houses, Porto, Portugal, 1999 8. Sejima/Nishizawa (SANAA), Courtyards in Toledo Glass Pavilion, Toledo OH, 2006 |
| Students with Last Names I-P | <ol style="list-style-type: none"> 1. Typical Islamic Courtyard House (e.g. Fez, Morocco) 2. Vasari & Vignola, Villa Giulia, Rome, 1555, OR G. Romano, Palazzo del Te, Mantua, 1534 3. Jorn Utzon, Kingo Housing, Elsinore/Helsingfors, Denmark, 1958 4. Phillip Johnson, Own House, Cambridge, MA, 1942 5. Alvar Aalto, Experimental Summer House at Muuratsalo, Finland, 1953 6. Shigeru Ban, 2/5 House, Hyogo, Japan, 1995 7. Ripple Design, Courtyard House, Los Angeles, 2006 8. Sejima/Nishizawa (SANAA), Courtyards in Rolex Center, EPFL, Lausanne, Switz., 2010 |
| Students with Last Names R-Z | <ol style="list-style-type: none"> 1. Typical Chinese Courtyard House (e.g. Beijing Siheyuan & Hutong) 2. Palazzo della Cancelleria, Rome, 1513 OR Palazzo Medici-Riccardi, Florence, 1460 3. Adalberto Libera, Housing at Tuscolano/Rome, Italy, 1952 4. Luis Barragan, Own House, Tacubaya, Mexico City, 1947 5. Ando, Horiuchi House (or Glass Block House), Osaka, Japan, 1976 6. Sejima/Nishizawa (SANAA), Courtyards in O-Museum (Ogasawara), Nagano, Japan, 1999 7. Rem Koolhaas/OMA, Maison a Bordeaux, Bordeaux, France, 1998 8. Alberto Campo Baeza, Casa Guerrero, Cadice Spain, 2006 |

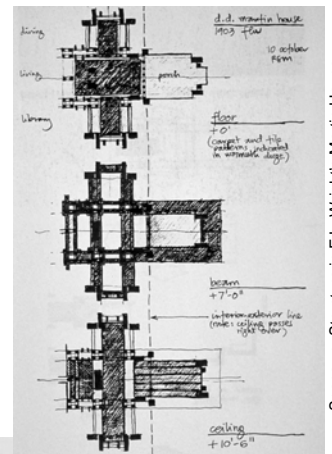
BIBLIOGRAPHY / BOOKS / SOURCES:

You should gather information from multiple reputable sources; no one source will have all the different kinds of information you need to "know" your building. Dig deep: good research requires intensity and tenaciousness. Follow lots of links and references, on the internet, and from footnotes in printed sources. Don't stop after you find the first few items. Don't ignore foreign language site: an architect can read plans and pictures in any language!!

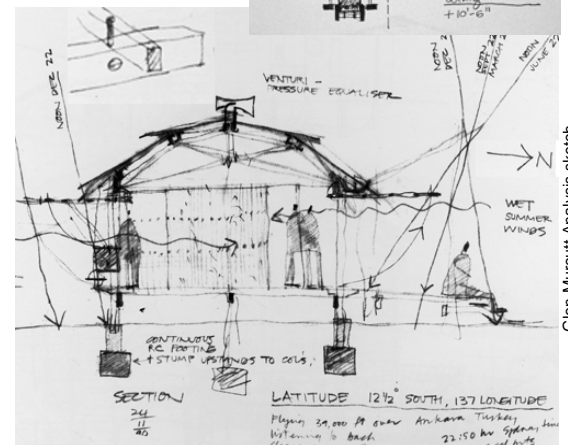
On the internet, be sure to check Google, Google Images, Google Books, Google Archives, Google Earth, as well as the websites, databases and blogs such as Galinsky, Great Buildings, Archinform, JSTOR, and many more... If you don't know these, TRY THEM NOW! Part of this assignment is becoming familiar with the resources. Share resources with each other, especially those without easy access to a library. Use the class blog, or create a shared Flickr page.

Some good books on these courtyard buildings, as well as on the general skill of analyzing architecture include:

- Macintosh, D. The Modern Courtyard House (1973)
- Pfeifer & Brauneck, Courtyard Houses. A Housing Typology (2008)
- Dennis, M. Court & Garden (1986)
- Gregory, R. Key Contemporary Buildings (2008)
- Davies, C. Key Houses of the Twentieth Century (2006)
- Blaser, W. Atrium. 5000 Years of Open Courtyards (1985)
- Sherwood, R. Modern Housing Prototypes (1978)
- Firley & Stahl, The Urban Housing Handbook (2009)
- Ching, Fr. Architecture: Form, Space, Order (1996)
- Clark, R. Precedents in Architecture: Analytic Diagrams... (2004)
- Unwin, S. Twenty Buildings Every Architect Should Know (2010)
- Garcia, M. Diagrams of Architecture: A Reader (2010)
- Eisenman, P. Ten Canonical Buildings 1950-2000 (2009)
- <http://andrew.cmu.edu/user/ma1f/48-200.html> (a dedicated research help page for 48-200 studio)



Space vs. Structure in F.L. Wright's Martin House



Glen Murcutt Analysis sketch