

Architecture Studio: 1st Year Spring

Spring 2012, CMU, Arch #48-105, M/W/F 1:30-4:20
Class Website: www.andrew.cmu.edu/course/48-105

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Off. Hr: M/W/F 12:30-1:00pm & by appt. in MM302

(3/30/12)

Project 4: COURTYARD HOUSE

MINDSET: The capstone project for freshman year studio is a modest courtyard house. It continues the year long investigation of small residences as a tool for understanding the core ideas of architecture, and the use of drawing as a tool to communicate ideas about the elements of architecture that create memorable space and experience. The primary goal of the project is to explore the transition from inside to outside, to understand and use effectively the many tools and architectural elements at the architect's disposal to craft a series of experiences that enriches the connection of architecture and its exterior context. In order to promote a rigorous design process, we begin the project by doing "research" exercises, readings, and precedents studies related to the fundamental design issues involved in a courtyard house.

ASSIGNMENT 1a: IN-OUT TRANSITION - Due: Wed. Mar. 28 & 30, 1:30pm

- Create a series of sectional drawings/diagrams exploring a broad variety of effective transitions between inside & outside in a courtyard house.
- You are encouraged to explore the many "layers" of space and experience on either side of a precise line separating interior conditioned space and the exterior, from landscape features outside, to architectural elements inside, and their blending in between.
- Explore the transition from inside to outside at different scales: from a site section, to a wall section or window detail
- Explore different kinds of public and private spaces both indoors and outdoors, from the public street to the private courtyard, from entry foyer to bedroom.
- Each diagram must be drafted (hand or computer) to show real thickness of materials. You may also add shading or other texture/color to indicate the sensual and perceptual quality of the spaces and experiences.
- Each diagram should be 4"x6", landscape format. Place 4 diagrams each on two 11x17 landscape oriented pages.

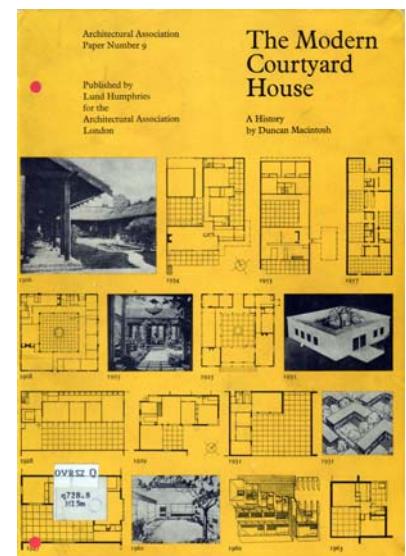
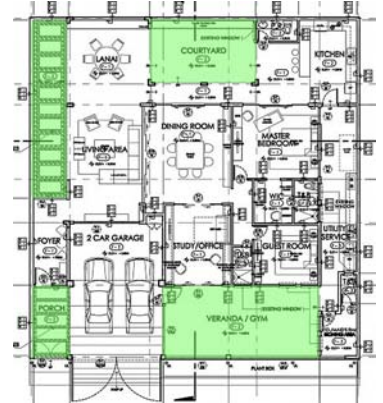
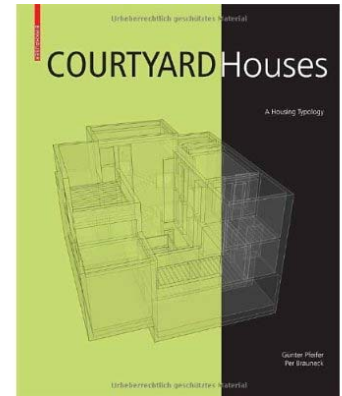
ASSIGNMENT 1b: READINGS - Due Mon. Apr. 2, 1:30

- Read carefully the following articles about courtyard houses and the nature of the indoor-outdoor relationships in this building type. **1)** Alvar Aalto, "From Doorstep to Living Room," in *Alvar Aalto in his Own Words* (1998) pp.49-55; **2)** J.J.F. Forés, "Courtyard housing: Environmental Approach in Architectural Education," in *Conference On Technology & Sustainability in the Built Environment*; and **3)** review Reichel, et al, "Introduction," to *Open - Close: Windows, Doors, Gates, Loggias, Filters* (2010), pp.8-33. These and other articles and books on courtyard houses can be found on Blackboard, and on the 48-105 carrel in Hunt library.

ASSIGNMENT 1c: PRECEDENT - Due. Mon. Apr. 2, 1:30

Each studio will collaborate as a group to study and report on the following eight (8) courtyard buildings (one of which was part of Proj.2):

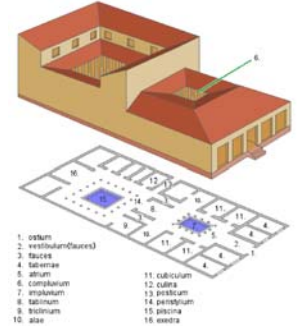
- Studio A**
- LC/JO**
1. Typical ancient Roman Atrium House, Italy (e.g. Pompeii)
 2. Giulio Romano, Palazzo del Te, Mantua, Italy, 1534
 3. Jorn Utzon, Bakkedraget Housing, Fredensborg, Denmark, 1962
 4. Breuer, Hooper House II, Bare Hills, MD, 1959
 5. Philip Johnson, Hodgson House, New Canaan, CT. 1950 (see Proj.2, C. Hayes)
 6. Tadao Ando, Azuma House (= Row House in Sumiyoshi), Tokyo, Japan, 1976
 7. Souto de Moura, Courtyard Houses, Porto, Portugal, 1999
 8. Ryue Nishizawa (SANAA), Moriyama House, 2006



- Studio B**
- FC/MG**
1. Typical Islamic Courtyard House (e.g. Fez, Morocco)
 2. Vasari & Vignola, Villa Giulia, Rome, Italy, 1555
 3. Jorn Utzon, Kingo Housing, Elsinore/Helsingfors, Denmark, 1958
 4. Philip Johnson, Rockefeller Guest House, NYC, 1942
 5. Jose Luis Sert, Own House, Cambridge, MA, 1957
 6. Alvar Aalto, Experimental Summer House at Muuratsalo, Finland, 1953 (see Proj.2, Y. Chan)
 7. Shigeru Ban, 2/5 House, Hyogo, Japan, 1995
 8. Alberto Campo Baeza, Casa Guerrero, Cadice Spain, 2006



- Studio C**
- KS/JK**
1. Typical Chinese Courtyard House (e.g. Beijing Siheyuan & Hutong)
 2. Pallazzo Medici-Riccardi, Florence, Italy, 1460
 3. Adalberto Libera, Housing at Tuscolano/Rome, Italy, 1952
 4. Ludwig Mies van der Rohe, Lemke House, Berlin, Germany, 1932
 5. Luis Barragan, Own House, Tacubaya, Mexico City, 1947
 6. Eliot Noyes, Noyes Residence II, courtyard, New Canaan, CT 1955 (see Proj2, N. Laguerre)
 7. Toyo Ito, U-House, Tokyo, 1976
 8. David Adjaye, Lost House, London, 2002-4.



Work together and with other studios to locate any resources you can access about your buildings, including books, articles (see Avery Index) and internet sources. Find multiple sources! Be sure to find a detailed plans and detailed sections of each building, especially relating to the courtyard (these will likely not be found in sufficient detail online; check out books and journals!).

Focus on the courtyard/terrace/garden. How do the exterior spaces relate to interior spaces? How do they relate to the street? How are they 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.

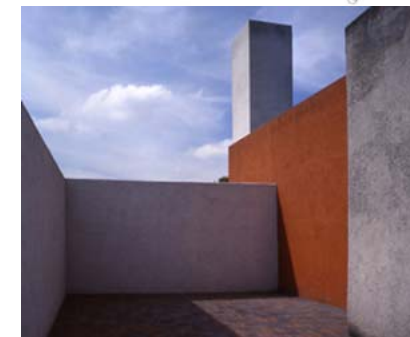


Search for compositional "principles" in order to discover the architectural "language," and the arrangement of important spaces and architectural elements (entry, walls, thresholds, openings, courtyards, geometry of spaces, circulation, poche, gardens, etc). Then go beyond, by focusing on the materiality 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?



Create two 11"x17" landscape format sheets for each building:

- 1) A sheet of hand-drafted floor plans, building sections, wall sections and details drawn to a scale that will fill the page (consider drawing bigger, and then reducing to fit on the page).
- 2) A sheet of photos, sketches and diagrams you create to reveal the unique composition and architect's intent, especially with regard to the courtyard(s) of each of your buildings.



Upload a 2pp. pdf of each building to the archpcserver using the file name to indicate which studio (A,B or C) and the name of the architect:

StudioX_Courtyard_Architect.pdf

