Course Overview for External Evaluators

“Frank Lloyd Wright” (48-441)
Taught: S99, S00, S01, S03, S05
Architectural History Project Course & Lecture Course
9 units, Prerequisites: 48-205
Course Website: http://www.andrew.cmu.edu/course/48-441/

This course began in 1999 as a “project course” whose goal was to teach about F.L. Wright, and at the same time create an exhibit on the “Taliesin Apprentices” in conjunction with students from the F.L. Wright School of Architecture in Wisconsin (see end of this section). I subsequently revised the course into a straightforward lecture course on the life, career, and historical context of F.L. Wright’s architecture. In the Spring of 2005, this course was again retooled as a “project-course”, with a slightly different title. “Frank Lloyd Wright: Precedent, Analysis & Transformation” was an architectural history course that sought to understand and learn from the design principles of F.L. Wright through a case study method. After a survey introduction to the career and bibliography of F.L. Wright and investigations of several significant houses across his career, the class investigated Wright’s Hagan House (a.k.a. Kentuck Knob) not far from Pittsburgh in detail for the rest of the semester. The main purpose was to engage in real archival research about the house, to compare it to other houses, and then to begin to “reverse engineer” some of the formal design principles of F.L. Wright’s. The focus was on the interior cypress woodwork, and the resolution of formal and structural “systems” that act like a “kit of parts,” each system nested within a larger one. A short second phase of the course asked students to generate or “grow” new designs from these discovered principles through iterative transformations.

The course led to a $23,000 grant project funded by the Enkeboll Foundation for Art & Architecture to expand the research, formalize the results, and share with several other research institutions. The grant paid to have a team of students working over the summer in a more directed manner in three phases. Phase I: “Re-Presentation” documented the house based on the original archival material, as well as in comparison to other Wright houses. Phase II involved the detailed formal analysis of the wood work, especially the hexagonal planning unit, as well as the spatial qualities produced by the built-in wood furniture and paneling. Phase III involved the trans later developed their own digital design projects based on the principles they discovered. generated new designs for a “seating opportunity” on the Kentuck Knob estate. The designs were based on the “principles” discovered in the Phase II analysis, but used digital modeling techniques to bring Wright’s ideas into the 21st century. Students realized close connection to their previous studies of “systems” in studio, to the precedent work of the 2nd year studios, and to the “computational construction kits and craft” being researched by colleagues such as Prof. Mark Gross. The project was coordinated with research teams using different case studies from the Higher Institute for Architecture, Antwerp, Belgium; and North Carolina State University.

The research created a large, 2-volume report that was presented to the other institutions in Antwerp, Belgium in the summer of 2005, and is available through my website. For other materials, including examples of student work, and class handouts, and the complete research project documentation books, please refer both the course website listed above, as well as my professional website:

http://www.andrew.cmu.edu/user/gutschow/flw48441.html
"Frank Lloyd Wright: Precedent, Analysis & Transformation" is an architectural history course that seeks to understand and learn from the design principles of F.L. Wright through a case study method. After a survey introduction to the career and bibliography of F.L. Wright and investigations of several important houses from throughout his career, the class will select one Wright house to analyze and work with in detail for the rest of the semester. The main purpose of the analysis will be to be more fully understand a design of F.L. Wright's, especially the interior woodwork, and see if it is possible to uncover "design principles" or "systems" that act like a "kit of parts." A second phase of the course will investigate how these principles might be used to generate or "grow" new designs through various transformations.

This is a "project course" that will explore architectural history through a unique "hands-on" method of learning. It will require much initiative, creativity and synthesis. It will demand much discovery and determine new paths to understanding Wright. Initiative and special funding for the course came in part from a grant from the Enkeboll Foundation of the Arts and Architecture to study the woodwork in several case studies of historic architecture.

**HEXAGONS & 30/60°**

- Bay Windows on early homes
- Martin House, Buffalo, NY, 1904 (windows)
- Midway Gardens, Chicago, IL, 1914 (decoration)
- Imperial Hotel, Tokyo, 1915-1923 (esp. furniture & decorative work)
- Bogh House, Milwaukee, WI, 1916-17 (decoration)
- A.M. Johnson Desert Compound, Death Valley, CA, 1922-25 (project)
- Nakoma Country Club, Madison, WI, 1923-24 (project)
- Kindergarten & Playhouse for Barnsdall, Los Angeles, 1923 (project)
- Doheny Ranch, Los Angeles, 1923 (project)
- Lake Tahoe Summer Resort, CA, 1922-1924 (project)
- Freeman House, Los Angeles, 1923-1924 (concrete block pattern)
- Taliesin III Apprentice Quaters & Chicken Coops, 1925
- San Marcos in Desert Resort, Chandler, AZ, 1928-1929 (project)
- Cudney House, Chandler, AZ, 1929 (project)
- Steel Cathedral, NYC, 1926 (project)
- St. Marks Towers, NYC, 1927-31 (project)
- Ocatilla Camp, AZ, 1928
- Taliesin Drafting Studio, 1932 (hearth & structure)
- Wiley House, Minneapolis, MN, 1933 (terrace)
- Fallingwater, 1935-38 (30/60° used to lay out plans)
- Kaufmann Office, Pittsburgh, 1937
- Hannah House, Stanford, CA, 1936
- Herbert H.ohrson House, Racine, WI, 1937 (playroom)
- Manson House, Wauauau, WI, 1938
- (Pfeiffer Chapel, Roux Library, Minor Chapel)
- Sidney Bazeet House, Hillsborough, CA, 1939
- Armstrong House, Cary, IN, 1939
- Audubon Plantation, Yemassee, SC, 1938
- Stevens House, Yemassee, SC, 1940
- Commons House, Kansas City, MO, 1940
- Wall Residence, Plymouth, MI, 1941
- Richardson house, Glen Ridge, NJ, 1940
- Neshast House, Carmel, CA, 1941 (project)
- Sundt House, Madison, WI, 1941 (project)
- Guuggenheim project, NYC, 1944
- Friedman Vacation Lodge, Pecos, NM, 1945
- Unitarian Church, Madison, WI, 1947
- McCartery Residence, Parkwvyn Village, Kalamazoo, MI, 1949
- Hughes House, jackson, MS, 1948
- Lamberton House, Oskaloosa, IO, 1948
- Walker Residence, Carmel, CA, 1948
- Anthony House, Benton Harbor, MI, 1949
- Reiley House, Pleasantville, NY, 1951
- Davis House, Marion, IN, 1950
- Berger House, San Anselmo, CA, 1950
- Mathews House, Atherton, CA, 1950
- Palmer House, Ann Arbor, MI, 1950
- Smith House, Jefferson, WI, 1950

**OCTOGONS & 45°:**

- FLW Home & Office, Oak Park, IL, 1898
- Bagley House Library, Hinsdale, IL, 1894
- Chauncy House, Madison, WI, 1895
- Romeo & Juliet Windmill, Taliesin, 1896
- Walter House, Quaqueton, IO, 1945
- Lincolin Service Station, Cloquet, MI, 1956

**COMPARISON BUILDINGS for KENTUCK KNOB**

<table>
<thead>
<tr>
<th>Building</th>
<th>Location</th>
<th>Year</th>
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<tbody>
<tr>
<td>Gillin House</td>
<td>Dallas, TX</td>
<td>1950</td>
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<tr>
<td>Kraus Residence</td>
<td>Kirkwood, MO</td>
<td>1951</td>
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<tr>
<td>Glare Residence</td>
<td>Lake Forest, IL</td>
<td>1951</td>
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<tr>
<td>Kinnon House</td>
<td>Lancaster, WI</td>
<td>1951</td>
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<td>Rubin House, Canton, OH</td>
<td>1951</td>
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<tr>
<td>Edgar Kaufmann Chapel</td>
<td>Mill Run, PA</td>
<td>1951-52 (project)</td>
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<tr>
<td>Chahroudi Cottage</td>
<td>Lake Mahopac, NY</td>
<td>1951</td>
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<td>Texart Studio, Blacs, ID</td>
<td>1952</td>
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<td>Price Tower, Bartisvile, OK</td>
<td>1952</td>
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<td>Andretion Court Shops, Beverly Hills, CA</td>
<td>1952</td>
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<tr>
<td>Point View Residence, Pittsburgh, 1952-53 (project)</td>
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<td>Boomer Residence, Phoenix, AZ</td>
<td>1953</td>
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<td>Cooke House, Virginia Beach, VA</td>
<td>1953</td>
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<td>Dobkins, Residence, Canton, OH</td>
<td>1953</td>
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<td>Beth Shalom, Synagogue, Elkins, Park, PA</td>
<td>1954</td>
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<td>Arnold House, Columbus, WI</td>
<td>1954</td>
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<td>Hagan House, Chalkhill, PA</td>
<td>1954</td>
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<td>Thaxton House, Bunker Hill, TX</td>
<td>1954</td>
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<td>Fawcett House, Los Banos, CA</td>
<td>1955</td>
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<td>Heritage-Henredon Furniture Line, 1955</td>
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<tr>
<td>Friedman House, Bannockburn, IL</td>
<td>1956</td>
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<td>Arizona State Capitol, Phoenix, 1957 (project)</td>
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<td>Ofelt House, St. Louis Park, MN</td>
<td>1958</td>
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<td>Albin House, Bakersfield, CA</td>
<td>1958</td>
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<tr>
<td>Stromquist House, Bountiful, UT</td>
<td>1958</td>
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<tr>
<td>Pilgrim Congregational Church, Redding, CA</td>
<td>1958</td>
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**OTHER**

- Fallingwater, 1935-38 (30/60° used to lay out plans)
- Usanian Model House, “90 Years of Living Architecture” Exhibit, Guggenheim Site
- Notz House, Briefly/Berndtson
- Douglas House, Ross, PA, P. Berndtson, 1962
HAGAN HOUSE ANALYSIS - OVERVIEW

In order to thoroughly analyze and understand I.N. & Bernadine Hagan's House on Kentuck Knob in Chalk Hill, PA (1954-56), we will divide the investigation into several subsidiary, inter-related parts. Each student will be responsible for researching and analyzing several aspects of the house and submitting a report summarizing their findings. A short second phase of the project will investigate possible transformations of the design based on our analysis (drafts due Mar. 25 & Apr. 8; final project May 8).

PART I, HEXAGON:
The hexagonal motif that underlies nearly all aspects of the Hagan House design will be the subject of several lectures in class and separate comparative investigations. In our analysis we seek to understand both how the Hagan House relates to FLW's other diagonal designs, as well as the unique aspects and implications for this house. All students should speculate and seek to find innovative ways to understand, analyze, and highlight the special nature of the Hagan hexagon, especially as it relates to their analysis of the parts.

PART II, WOODWORK:
Although masonry, flagstones and concrete are clearly important materials in the Hagan House, the class will focus on the impressive woodwork that undoubtedly shapes the most important architectural experiences and design features of the house. Each student will research one of the following three primary components of the woodwork. Work to familiarize yourself with the woodwork materials, styles. Speculate on why and in what ways the Hagan House woodwork is both unique ans similar to other buildings by FLW.
1. Walls & Structure, construction system of the main exterior & interior walls
2. Furniture, the built-in furniture, & furniture originally approved or designed by FLW, including couch, dining, hallway shelving, bedrooms
3. Ornament, the cutout clerestorys, dentils, triangular lights, hexagonalskylights, doors and windows, color/grain/species of wood material

PART III, FUNCTIONAL SPACES:
All students will study one of the main spaces listed below. Record it in text, sketch, plans, photos, and verbal description. Analyze it in relation to FLW’s earlier work, in relation to “ordinary” vernacular architecture, as well as in relation to other contemporary high-design buildings. Particular emphasis should be placed on comparing your space in the Hagan House to similar spaces in the Prairie Houses (esp. Martin) and other Usonian houses (esp. Pope-Leighhey). Be sure to focus on the experiential relationship of your space to the rest of the house (i.e. how it fits into the overall plan).
1. Entry & circulation; location in plan, width of halls, flow
2. Kitchen, also called “work room,” relation to living, size, role of women
3. Living Room; views, hearth, planters, “community”, relation to terrace
4. Dining Room; table & cabinets, relation to kitchen, liv.rm. & terraces
5. Bedrooms & Baths; separate wing, master & children, bath geometry

PART IV, OTHER ASPECTS:
All students will study one of the other important aspects of the Hagan House, documenting the unique aspects of the house with respect to your topic, and comparing it to related work by FLW and other architects at the time.
1. Siting, orientation, landscaping, topography, relationship of interior & exterior
2. Non-Living spaces & structures: roof, foundation, basement, overhangs, planters, carport, terraces
3. Systems; heating, water, ventilation, solar gain, fire places
4. Program & Clients, relationship of architect & client, client satisfaction, program vs. delivered house, living in the house, alterations, etc.

All students should obtain a separate sketchbook/notebook in which all thoughts about the Hagan house can be recorded, assembled, compared and developed.

BIBLIOGRAPHY:
Hoffmann, Donald. FLW’s Kentuck Knob (2000)
Pfeiffer, B.B. & Y. Futagawa. FLW Selected Houses vol.7 (1991), pp.162-175
Restoration As-Built Plans, 1988, in Hunt Library Architectural Archives
Working Drawings, set from Taliesin Archives
Collection of newspaper & magazine articles, including:
HAGAN HOUSE ANALYSIS – ASSIGNMENT

1. RESEARCH
   A. Find articles (Avery) and books (CAMEO & Worldcat) containing material related to each of your assigned research subjects (see chart below). If CMU does not own, order them via ILL (ASAP). Look in literature about FLW, but also in other sources that will give you comparative examples and material (contemporary architectural magazines, Arch1 Graphics Standards from the time, sources on modern design/houses/furniture/etc.)
   * Work to find at least 3 specific sources on each of your subjects.
   B. Flip through the most comprehensive books and monograph series on FLW from the list below and pick FIVE (5) FLW or other houses that you would like to compare to the Hagan House with respect to your particular analysis subjects (they can be five different houses for each subject):
      - Storer, FLW Companion (1993)
      - Pfeiffer & Futagawa, FLW Monograph, 12 vols. (1984-88)
      - Pfeiffer & Futagawa, FLW Selected Houses, 8 vols. (1989-91)
      - Sergeant, Usonian Houses
      - McCarter, FLW: Levine, The Arch. of FLW: Riley, FLW, Architect

2. GRAPHIC ANALYSIS
   A. Compare photographs, plans, sections, and details of the Hagan House with the other houses you have selected. Using your own knowledge about FLW, his sources and design principles, work to find significant and meaningful similarities and differences.
   B. Speculate as to WHY FLW or another architect might have made the different or similar design decisions you discover through comparison.
   C. Present your findings in a series of 11x17 sheets using photographs, sketches, drafted analyses as well as captions or explanatory paragraphs.

3. WRITTEN ANALYSIS
   A. Prepare a 3-5pp. written, text-based summary of your findings on each subject (9-15pp. total). Be aware of how writing down the findings of your research and comparative evaluations should bring a different level of awareness about the issues raised in the graphic comparison. Writing and drawing each help clarify thoughts and discoveries in different ways!

4. TEAM ANALYSIS SUBJECT ASSIGNMENTS (see outline above):
   II: WOODWORK
   - Will Hopkins
   - Emily Brayton

   III: FUNCTIONAL SPACES
   - Brian McKinney
   - Kevin Wei

   IV: OTHER
   - Carole Aspeslagh
   - Diego Bauza

5. SCHEDULE:
   - Feb. 25: Lecture on Hagan Hse. and assignment of subjects, Assign Hoffman & McCarter readings
   - Mar. 2: Discuss assignment details, start research
   - Mar. 20: Field Trip to Hagan House & Fallingwater
   - Apr. 8: DUE: Rough draft of “Graphic Analysis”
   - May 8: DUE: Final report, including Graphic & Written Analysis, and transformation design

6. BIBLIOGRAPHY (see also books listed in “Overview” above!)
   GENERAL FORMAL ANALYSIS
   - Hanks, D.A. “The Decorative Designs of FLW” (1979)
   - HANNA, P. FLW's Hannah House (1981)
   - Hershey, G. “Monumental Impulse” (1999) Ch.4, pp.62-72
   - Alshin, A. FLW in the Lost Years 1910-1922 (1993), esp. Ch.9, pp.261-286
HAGAN HOUSE ANALYSIS - CONTEXT IN CONTEMPORARY PERIODICALS

DUE: with overall Analysis, May 8

One of the most productive modes of analysis, indeed of all understanding, is through COMPARISON to a VARIETY of CONTEXTS. The original Hagan House Analysis Assignment urged you to explore at least five other houses in relation to your Kentuck Knob analysis topics, either other houses by FLW, or contemporary houses.

In order to promote more intense investigation of the contemporary architectural scene as a means to understanding Kentuck Knob, every student will be asked to search through one professional architectural periodical and one domestic home magazine from 1953-1956 to find specific comparative images. ... search through a foreign architectural magazine and/or bring back images related to other analysis topics of your peers.

Be sure to look at feature articles, notes, and advertisements. Try to get a feel for the color schemes, the fashion, style and mood of the era. What are the dominant themes? What are the dominant companies? Who is the target audience? What is the "ideal" house represented in the magazine? What is the role of women? What is the approach to machines? How is wood shown and used in architecture? What kind of ornament is depicted?

DOMESTIC HOME MAGAZINES
House and Garden (New York, 1901-1977)
House Beautiful (New York, 1951-1975)
House and Home (New York, 1953-1977)
Arts & Architecture (Los Angeles, 1945-1966)

EXTRA CREDIT
Domus (Milan, 1950ff.)
Werk (Bern, 1947-1976)
Shinkenchiku / Japan Architect (1955-pres.)
L’Architecture d’aujourd’hui (Boulogne, 1953-pres.)
Bauen & Wohnen (Munich, 1952)

ANALYSIS TOPICS
Woodwork: Walls/Structure, Ornament, Furniture
Function: Entry, Kitchen, LR, DR, Bed/Bath
Other: Site, Non-living, Systems, Client/Program

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ANALYSIS TOPICS
Woodwork: Walls/Structure, Ornament, Furniture
Function: Entry, Kitchen, LR, DR, Bed/Bath
Other: Site, Non-living, Systems, Client/Program

Inspired by the quotes above, and using all the knowledge, experience, and intuition about FLW buildings and Kentuck Knob in particular that you have gathered over the course of the semester, “respond” to the Hagan House by designing a small addition, remodelling, or additional element for some part of the house. Your design can either “blend in” and “resemble” Wright’s aesthetic, OR it can be based on the “principles” that he espoused, including “vitality, integrity, and magic.” Consider also the hexagonal “unit system” that is at the core of the entire Hagan House, and the idea of architecture as a “symphonic poem.”

Your design can be “retro” for 1953, or “contemporary” for 2005. You can use any appropriate material, as long as it conforms to Wright’s principles.

Your design should be communicated through a series of sketches on a 8.5”x11” or 11”x17” page to be appended to your Hagan House Analysis. To accompany and justify your design as fitting the Hagan House, you should compose a 100 word “concept statement” or explanation of principles.

Examples of the items you might design are taken from the list of items that Mrs. Hagan took with her when she left in 1986, or for features that might need to be renovated or updated over time:
- Dining Room Chair - Exterior Planter
- Living Room Chair (wood or upholstered) - Kitchen Skylight
- Coffee Table - Improved Tools/He
- End Table - Entry Sign for Kentuck Knob
- Chest for Entry - Ticket Booth for estate
- Wood Screen - Interpretive Sculpture or Design-Build Element
- New Rug

The list is not complete, meant more to illustrate a scale and complexity. You are free to choose any element you wish, or to compose an interpretative art work or design of any kind.
"Frank Lloyd Wright & Modern Architecture" is an architectural history course that investigates the career and legacy of the famous American architect Frank Lloyd Wright within the context of modern architecture. We will attempt to understand the great variety of work and ideas produced by Wright over seven decades, as well as the context which stimulated and fed off of his designs.

We will focus on issues including: 1) Wright's buildings and projects; 2) the concept of organic architecture; 3) the historical and intellectual climate that gave rise to FLW's work, including the work of Richardson and Sullivan, the Shingle Style and International Style, Japanese and European modern architecture; 4) investigations of Wright's progressive clients, innovative use of building materials, changing design theories, invented building systems, radical social & political theories, broad urban experiments, and publishing prowess; 5) the influences Wright had on modern architecture worldwide, especially the tremendous influence he had in America through his own buildings, writings and lectures, as well as some 1200 disciples he trained through his Taliesin Fellowship.

The work for the course falls into three primary parallel-running categories: 1) Attendance and readings for M/W lectures on F.L. Wright's work; 2) Readings, discussions, student presentations and films about the architectural context of modern architecture; 3) a focused research paper comparing one building by FLW to any other modern building; two mid-terms to test your knowledge and retention of course material.

Objectives:
-- To familiarize FLW's major architect's work, built & unbuilt
-- To understand FLW's philosophy of "organic architecture"
-- To understand the architectural and intellectual context of FLW's work and time, especially parallel developments in modern arch.
-- To develop skills of critical thinking, quality research, and clear communication through a variety of writing & reading projects.

Required Texts:
- Brooks, H. Allen, ed. Writings on Wright (MIT 1991) $14.00
Optional:
- McCarter, Robert, Frank Lloyd Wright (Phaidon, 1999) $19.95
Spring Semester, 1999
48.441, Frank Lloyd Wright and His Taliesin Legacy
K. Gutschow, 9 Units

Taliesin Apprentices Exhibit, Summer 1999
Collaborative Design-Build Project and Trip
CMU & FLLWSA Students, Indep. Study and SURG