

Syllabus: ARCH 489 Making and Architecture, Spring 2010

Times: Class meets on Tuesdays from 5:30 to 8:00 P.M. in ARCC 305

Instructor: Michael OBrien
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office hours by appointment.

Course Title: ARCH 489 Making and Architecture. A study of significant works of contemporary architecture and the materials, means and methods used in their making.

Prerequisite(s): Lower division classification (ENDS, ENDL) in the BED Architectural Studies Option.

Introduction:

Architectural designs ultimately become translated from idea to form and again from form to materials to be made. That is constructed to become present in the world. As ideas and forms have become more expressive and less conventional, they frequently require non-traditional, innovate materials, systems, construction processes and project delivery forms to maintain a high degree of conceptual clarity in the constructed work.

Across history this has been the case, from the Hall of Sassanian Kings through the latest works by Daniel Liebeskind, Toyo Ito, and Frank Gehry, architects who embrace bold advances in form and space similarly embrace innovations to achieve these in built works.

This class will study the roles of materials, construction methods and project delivery methods used to achieve these innovative structures.

Objectives: Upon completing this course the student will be able to:

- Identify key strategies for structuring, materials and project delivery methods as utilized in contemporary and historical precedents of innovative building forms.
- Understand alternative methods of structuring innovative forms towards the goal of constructing the form.
- Be able to recommend structuring strategies, materials systems, and collaborative teams towards constructing buildings with innovative forms.

Course topics and calendar: Topics for the course are listed below. Other material may be presented depending on class interaction and problem contexts.

- - Wk 1 Innovation and interrelationships: the cultural, material, and process interrelationship diagram.
 - Wk 2 Rural Studio, Butler Square, Virginia Merrill Bloedel Center, Avalanche Chapel, Cribbed, Stacked and Stickered, Swiss Sound Box
 - Wk 3 **Student Projects Phase 1 pinup, top tens**, Sticks as Bones... wood, lattices, weak structure and the Ten Thousand Things
 - Wk 4, Sticks as Bones continued: Space Frames, IBM Pavilion and Thorncrown, Eiffel's Viaducts
 - Wk 5, **Student Projects Phase 2 Top Five described, made first draft DUE**, Non-orthogonal lattices: Federation Square, St. Expury TGV, Mediatheque, TOD's, Mikimoto,
 - Wk 6, Incremental transformations, 290 Mulberry, Salem Mausoleum, Thermal Baths at Vals
 - Wk 7, **Student Projects Phase 2 Top Five described: hand in**, Lofting, a series of sections swept by a surface: Liberty, Ronchamp, Weismann,
 - Wk 8, Lofting continued, Kansai, Bilbao and Disney

- Wk 9, Cats, Firminy, Dulles, Federal Reserve, Sagrada Familia
- Wk 10, Supertrusses: ICA, DAM, Simmons Hall, CCTV,
- Wk 11, Supertrusses continued: Fazlur Kahn, Wyly
- Wk 12, Corrugation approaches lattice, Breuer, Nervi, Candela, Dieste, Santa Caterina Market
- Wk 13, **Student Projects Phase 3 FIRST DRAFT DUE, Top Three compared**, Corrugation and Ship Building: Yokohama Terminal
- Wk 14, Surface as Idea: Fog Pavilion, Arab Institute, Copper Box's, Kunsthaus, Shaulager, photographic concrete.
- Wk 15, **Student Projects Phase 3 Final Draft DUE, Top Three compared**, wrapup

Projects:

Your top 10.... Phase 1.

Issued: Week one

Due: Week three

Assemble a list of your top ten for each of the following element categories of architecture. Provide an image at least 3"x3" for each as well as a caption explaining what building, architect, and location where each element is found.

- Your top 10 shading devices
- Your top 10 ramps
- Your top 10 roofs that become walls
- Your top 10 connections
- Your top 10 building skins

Your top tens should be presented on one poster plotted out (make sure your name is on it...bring pins or tape to pin it up!), and on ten powerpoint slides (two per element). (Bring to class on stick drive or cd)

Phase 2.

Describing the top five described

Issued: Week 3

First draft due: Week 5

Final draft due: week 7

Choose one element from your list in each of the categories from Phase 1.

Describe the following in words

- The elements shape in plan and section
- The elements material
- The elements character (refined, coarse, heavy, light)
- The elements influence on space (bounds, stands free, defines by implication, frames, releases...)
- The way the light interacts with the element (dematerializes, grades, reflects, absorbs, adds color to...)

The idea being that you describe what the element is, how the architect gave it a distinct character, and the effect of the what and how on the surrounding spaces.

Your description of the top five should be double-spaced using 1" margins and 12 point font. Include an image or two at the start of each description. Footnote key sources you used to learn about the element, key ideas, and support for your conclusions. Use the Chicago Manual of Style for footnote format.

Make sure your draft and final version are stapled or bound and have your name at the top of the page.

Phase 3.

The Top 3, made, lit, and photographed

Issued: Week 7

First draft due: Week 13

Final draft due: Week 15

Choose three of the elements you described in phase 2.

Make three solid cubes, (one for each element) 4 inches on a side (out of any material) that has the same qualities you saw in the images of your element.

Light the element to show off these qualities

Print the photos as a poster and bring the cubes to class (one due at week 13 as your first draft)

Be prepared to present your cubes in class and discuss their qualities and what you did to achieve those qualities.

Put your name (discretely) on each cube in a way that won't fall off.

Weighting

- Project 1 Timely submission and completeness. Graphic quality of reproductions, accuracy of captions, page layout, 15%
- Project 2 Timely submission, first draft accuracy, clarity, citations, and completeness 15%
- Project 2 Timely submission, final draft insights, accuracy, clarity, citations, and completeness 15%
- Project 3 First draft Timely submission, quality of craft, ability to articulate qualities and methods used to achieve them, peer perception. 15%
- Final draft Timely submission, quality of craft, quality of lighting, focus sharpness, ability to articulate qualities and methods used to achieve them, peer perception 20%
- Class Attendance and Participation, 20%

Required Text: Atlas of Novel Tectonics by Jesse Reiser. New for under \$20.00
The Yokohama Project (temporarily out of stock at Amazon, others have it for \$40 to \$50)

Suggested Text: Details of Modern Architecture V.2, Edward Ford, MIT Press
Detail Magazine, WWW.Detail.De

Academic Integrity Statement and Policy

All work and conduct related to this class is governed by the Aggie Honor Code, <http://www.tamu.edu/aggiehonor>.

"An Aggie does not lie, cheat or steal, or tolerate those who do."

Statements on attendance:

The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments. Instructors are expected to give adequate notice of the

dates on which major tests will be given and assignments will be due. This information should be provided on the course syllabus, which should be distributed at the first class meeting. Graduate students are expected to attend all examinations required by departments or advisory committees as scheduled formally.

Students who are requesting an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code (See Rule 24).

Excused Absences

7.1 The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the university are the following: (1 Muster)

7.1.1 Participation in an activity appearing on the university authorized activity list. (see List of Authorized and Sponsored Activities <http://studentactivities.tamu.edu/online/sponsauth/>)

7.1.2 Death or major illness in a student's immediate family. Immediate family may include: mother, father, sister, brother, grandparents, spouse, child, spouse's child, spouse's parents, spouse's grandparents, stepmother, step-father, step-sister, step-brother, step-grandparents, grandchild, step-grandchild, legal guardian, and others as deemed appropriate by faculty member or student's academic dean.

7.1.3 Illness of a dependent family member.

7.1.4 Participation in legal proceedings or administrative procedures that require a student's presence.

7.1.5 Religious holy day. (See Appendix IV. <http://studentrules.tamu.edu/append4.htm>)

7.1.6 Injury or Illness that is too severe or contagious for the student to attend class.

7.1.6.1 Injury or illness of three or more days. For injury or illness that requires a student to be absent from classes for three or more business days (to include classes on Saturday), the student should obtain a medical confirmation note from his or her medical provider. The Student Health Center or an off-campus medical professional can provide a medical confirmation note only if medical professionals are involved in the medical care of the student. The medical confirmation note must contain the date and time of the illness and medical professional's confirmation of needed absence.

7.1.6.2 Injury or illness less than three days. Faculty members may require confirmation of student injury or illness that is serious enough for a student to be absent from class for a period less than three business days (to include classes on Saturday). At the discretion of the faculty member and/or academic department standard, as outlined in the course syllabus, illness confirmation may be obtained by one or both of the following methods:

Texas A&M University Explanatory Statement for Absence from Class form available at <http://attendance.tamu.edu>.

Confirmation of visit to a health care professional affirming date and time of visit.

7.1.6.3 An absence for a non acute medical service does not constitute an excused absence.

7.1.7 Required participation in military duties.

Americans with Disabilities Act (ADA) Policy Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities.

Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit <http://disability.tamu.edu>.