

## COURSE OUTLINE – Spring 2010

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### ARCH 406- 501 INTERDISCIPLINARY DESIGN V

(5 Credit hours)

MW 1:50 pm – 4:50 pm – Room ARCA 120

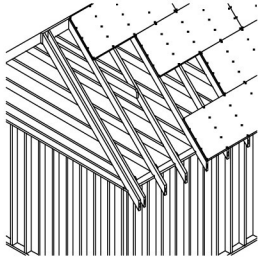
F 1:50 pm – 3:30 pm – Room ARCA 120

Instructor: Susan Rodiek, Ph.D., NCARB - [rodiek@tamu.edu](mailto:rodiek@tamu.edu); (979) 862-2234

Visiting: Joseph McGraw, Ph.D. - [jjmcgraw5@verizon.net](mailto:jjmcgraw5@verizon.net); (979) 696-3085, (979) 218-6350

Office: Jack K. Williams Building (ground floor, W014), Center for Health Systems & Design Research Annex

Hours: Thursday 1:30-2:30, or by appointment



*In the end, the lasting product of architecture is the shape and reality of the finished building. Everything in architecture comes from layout, organization, form, shape. And how elusive this is!*

Christopher Alexander (2001). *The Nature of Order: The Process of Creating Life*, p. 432. Berkeley, CA: The Center for Environmental Structure.

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## 1. COURSE DESCRIPTION

Topical approaches to design, emphasizing theory and practice of architecture or related disciplines, such as urban design, interior design, health care design, etc. (from catalog). Prerequisites: Upper level classification in the BED Architectural Studies Option; ARCH 405.

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## 2. INTRODUCTION

This course will provide an opportunity for students to develop skills by focusing on a larger project that requires the integration of multiple disciplines, such as urban design, landscape design, structural design, and interior design. Following a brief design charrette at the beginning of the semester, Project 1 will give students a chance to work on a short project with global implications. Project 2 will focus on a team-based comprehensive solution to a larger project with multiple preliminary and finished products. Students will develop the contextual fit, develop design goals based on the needs of users, explore structural systems and details, and write essays to articulate aspects of their design solutions. Project 3 will allow students to work more independently on an open-ended creative effort, linked to specific readings. Small projects throughout the semester will involve research, writing, sketching, photography, and graphic design. Listed projects may be modified or substituted during the semester to respond to emerging opportunities. A design journal will be kept throughout the semester, in the form of a sketchbook to record ideas and process drawings, design development, theoretical exploration, lecture notes etc.

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## 3. COURSE OBJECTIVES

Primary objectives in this course are that students will: a) develop their ability to design for intentional environment-behavior interactions and responses; b) increase their depth of understanding of structural steel systems; c) improve teamwork and time-management skills; and d) gain experience and facility with diverse methods for design and visual communication, both traditional and innovative, including writing skills.

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## 4. METHODS

This studio will explore a wide range of approaches to design and communication, ranging from hand sketching and model-building, to 3-D rendering and free-form exploration of materials. Students will work in teams and individually, and may also collaborate with students from other courses on portions of the projects. Brief projects will give students the opportunity to conduct and present research in oral and written format.

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Jan 20	<u>BEGIN PROJECT 1</u> , set up studio, prepare for Design Charrette
Jan 22	<u>DESIGN CHARRETTE</u> -- all Architecture studios
Jan 25	Review Project 1 research
Jan 27	Studio work session
Jan 29	Studio session w/ crits
Feb 1	Pinup Review
Feb 3	Studio work session
Feb 5	Studio session
Feb 8	<u>PROJECT 1 - FINAL PRESENTATION</u> . Select teams for Project 2.
Feb 10	<u>BEGIN PROJECT 2</u>
Feb 12	Studio session
Feb 15	Pinup review
Feb 17	Studio work session
Feb 19	Studio desk crits/ work session
Feb 22	Pinup review
Feb 24	Studio work session
Feb 26	Studio desk crits/ work session
Mar 1	Pinup review
Mar 3	Studio work session
Mar 5	Studio desk crits/ work session
Mar 8	<u>PROJECT 2 – MID-POINT REVIEW</u>
Mar 10	Studio work session
Mar 12	Studio desk crits/ work session
<b>Mar 15-19</b>	<b><i>S P R I N G B R E A K</i></b>
Mar 22	Pinup review
Mar 24	Studio work session/ desk crits
Mar 26	Studio desk crits/ work session
Mar 29	<u>PROJECT 2 - PRE-FINAL REVIEW</u>
Mar 31	Finalize presentations
Apr 2	Finalize presentations
Apr 5	<u>PROJECT 2 - FINAL REVIEW</u>
Apr 7	<u>BEGIN PROJECT 3</u>
Apr 9	Studio desk crits/ work session
Apr 12	Pinup review
Apr 14	Studio work session
Apr 16	Studio desk crits/ work session
Apr 19	<u>PROJECT 3 - MID-POINT REVIEW</u>
Apr 21	Studio work session
Apr 23	Studio work session (ROWLETT LECTURE 1:00-4:00 PM)
Apr 26	Pinup review
Apr 28	Studio work session
Apr 30	Studio desk crits/ work session
May 3	<u>FINAL PRESENTATION – PROJECTS 2 AND 3</u>

May 6

Turn in design journals

## 6. PERFORMANCE EVALUATION AND CRITERIA

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Students are expected to be self-motivated and strive constantly to improve their own skills and knowledge base while contributing to the learning environment shared with other students. Evaluation involves examination and review of products by the instructor, external reviewers, client representatives, and other students. The primary areas of evaluation are: PARTICIPATION, KNOWLEDGE/ SKILL DEVELOPMENT, and PRODUCTS.

- A *Exemplary work habits and contributions to the class  
Exceptional evidence of learning and growth  
Highly successful products for assigned work objectives*
- B *Good and consistent work habits and contributions to class  
Clear evidence of learning and growth  
Satisfactory products that meet assigned objectives*
- C *Inconsistent attention to work and class participation  
Moderate development of skills and knowledge base  
Work products do not fully meet assigned objectives*
- D *Poor attention to work and class activities  
Limited understanding of concepts and weak skill development  
Work products do not meet assigned objectives*
- F *Little indication of interest in the class or architectural education  
Failure to demonstrate understanding of basic concepts and skills  
Inadequate work products*

Students will be evaluated on individual merit, and members of a team may receive different grades. Projects will be evaluated based on design concept, development, and presentation. Design concept refers to the clarity and inventiveness of your design, development refers to making the concept feasible and realistic, and presentation refers to the craftsmanship and execution of your solution. Grade distribution may be adjusted to reflect changes in project length and/or emphasis.

### GRADE DISTRIBUTION:

Project 1: Short project, to be discussed	20%
Project 2: Re-Ligare Institute – ACSA Competition	45%
Project 3: Creating Lightness	20%
Mini-projects/ attendance/ team coordination, design journals	<u>15%</u>
	100%

## 7. ATTENDANCE AND TIMELINESS

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You are expected to be present during scheduled meeting times, ready to work, and with appropriate materials on hand. You are expected to work primarily in studio, both during and aside from scheduled class hours. Most sessions will begin with a critique of previous work, and a discussion of new information and assignments, so students should plan to arrive early or on time. Lateness or unexcused absence will result in substantially lowered grades (excused absence requires written verification for medical or University-mandated reasons).

**When you know you will be late or absent, it is your responsibility to notify the instructor IN ADVANCE of the class session, by PHONE, EMAIL, or preferably both.** This will not excuse the absence, but allows the rest of the group to begin on time. Individuals who are late or absent are *responsible for finding out about*

any missed information and assignments, and completing all work on the assigned schedule. Students are expected to coordinate closely with their partners on team projects.

**Assignments must be turned in on time**, even if incomplete – late submittals will automatically lose 30% or more of the credit possible for that project. Students will lose grade points for unexcused late or missed classes.

## **8. MATERIALS AND FIELD TRIPS**

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This studio requires typical digital and manual media for sketching, drafting, and rendering, as well as model making tools and materials, photographs and prints (see attached list for suggested materials). Additional materials may be required for specific projects. Field trips are expected to be in the local and regional areas, including visits to project sites and other example sites. Students should inform their other instructors as early in advance as possible of scheduled activities that will require them to be absent from other classes.

## **9. REQUIRED AND RECOMMENDED TEXTS**

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Students are expected to have access to basic reference texts and resources on architectural design, including structures, building systems, and design detailing. The main text for this course is *A Pattern Language*, a fairly comprehensive resource that addresses basic design issues in relation to human usage and appreciation. This text will be a useful reference in future studios. A second required text is *Lightness: The Inevitable Renaissance of Minimum-Energy Structures*, which will serve as point of departure for an individual creative design project.

### REQUIRED TEXTS:

Christopher Alexander et al. *A Pattern Language: Towns, Buildings, Construction*. (Oxford University Press 1977).  
Adriaan Beukers & Ed Van Hinte. *Lightness: The Inevitable Renaissance of Minimum-Energy Structures*. (Rotterdam: 010 Publishers, 1999).

### RECOMMENDED READINGS:

Victoria Bell and Patrick Rand. *Materials for Design*. (Princeton Architectural Press, 2006)  
Michael Benedikt. *For an Architecture of Reality* (New York: Lumen Books, 1987)  
John Fernandez. *Material Architecture*. (Spon Press, 2006)  
Paul Laseau. *Graphic Thinking for Architects and Designers*. . (2001). New York: Wiley.  
Annette LeCuyer. *Steel and Beyond*. (Birkhauser Basel, 2003)  
Peter Zumthor. *Thinking Architecture* (Basel: Lars Müller, 1998)  
*Modern Steel Construction*: Monthly magazine available to architectural students; online at [www.modernsteel.com](http://www.modernsteel.com)

Additional text-based readings and online research materials will be referenced as work progresses.

## **10. DOCUMENTATION OF STUDENT WORK**

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*Reviews and critiques* – **students are expected to make tangible progress between each studio session**, unless otherwise noted. Most sessions will begin with group or individual review of the most recent progress made. Students without documentation of substantial progress may not receive reviews, and will receive lower evaluations as a result. For each day's desk crits, *students should have their current work available for review in printed format in advance each studio session*, even if small-scale and black & white. Students should also have tracing paper available before desk crits begin.

*Digital information* -- **students should frequently backup their all work on external media** such as CDs, external hard drives, flash drives, etc. to safeguard against the possibility of laptop crashes and other losses. As network folders and temp drives are erased by IT staff on a frequent basis, any work produced on university

equipment must be saved on the student's own external media. Students may develop a common folder for sharing images, maps, and research information, but all material should be backed up in a second location.

*Optimal file size* should be used for images – adequate to provide good resolution for the medium to be used, but not large enough to slow down operating systems.

*Printing and Laser-cutter use*, especially for reviews and presentations, should be done EARLY, due to unexpected delays and obstacles – you should assume that anything that can go wrong, will, and have an alternate plan for finishing work in time.

*Studio products* such as models and drawings may be retained by the instructor for accreditation or other purposes. Students should plan to document and/ or make copies of their work for their own use in the form of copies, photographs, slides, or digital images.

*Multiple copies* are typically required of all papers, reports, etc., to share with other students, and so the instructor can mark up one copy to return to the student, and retain the other copy.

## **11. STUDIO CULTURE AT TEXAS A&M UNIVERSITY: A POLICY STATEMENT**

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### *Studio Culture Statement*

All students, faculty, administration and staff of the Department of Architecture at Texas A&M University are dedicated to the principle that the Design Studio is the central component of an effective education in architecture. They are equally dedicated to the belief that students and faculty must lead balanced lives and use time wisely, including time outside the design studio, to gain from all aspects of a university education and world experiences. They also believe that design is the integration of many parts, that process is as important as product, and that the act of design and of professional practice is inherently interdisciplinary, requiring active and respectful collaboration with others.

## **12. AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT**

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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>.

## **13. ACADEMIC INTEGRITY STATEMENT**

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### AGGIE HONOR CODE

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

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

*For additional information please visit:* <http://www.tamu.edu/aggiehonor>.

**MODELMAKING/ CONSTRUCTING OBJECTS**

- ❑ Desktop cutting surface
- ❑ Mat knife / X-acto knife
- ❑ Foam-core board for models and for mounting drawings
- ❑ Non-hardening modeling clay: 1 or 2 pkgs (*off-white or ivory*)
- ❑ Brown cardboard, chipboard, foamcore board
- ❑ White glue ("*tacky*" type preferred)
- ❑ Rubber cement, straight pins, ordinary masking tape
- ❑ Glue gun and glue sticks
- ❑ Various materials as required for object construction

(also: museum/ mat board, bass/ balsa wood, flexible foam sheets, materials for specific projects)

**SKETCHING / DRAWING / / PRESENTATION**

- ❑ Design journal – for sketching and making notes
- ❑ Cover to protect desk surface and facilitate sketching (*must be taped down*)
- ❑ Laptop with graphics software (*CAD, Photoshop, Powerpoint, etc.*)
- ❑ Storage media (*CDs, external hard drives, flash drives*)
- ❑ Tracing paper (*rolls, NOT pads*) in different-width rolls - 12", 18", 24" (*white is most versatile*)
- ❑ Drafting tape or dots (*not ordinary masking tape – it leaves a sticky residue*)
- ❑ Black ink pens in different line widths: thin, medium, and thick
- ❑ Soft "fat" sketch pencils (*'Ebony' or 'Berol Drafting Pencils'*)
- ❑ Sketchbook
- ❑ Architects scale (*pref. triangular*)
- ❑ Engineers scale (*should be in feet, not metric or proportional scale*)
- ❑ Gray markers in different values (*try 20%, 40%, 60%, 80% - pref. WARM gray*)
- ❑ Colored markers and pencils (*for sketching and rendering*)
- ❑ Parallel drafting bar or T-square
- ❑ Drafting triangles, a few in 45 and 30/60; also an Adjustable triangle
- ❑ Very small triangle to use for lettering (*either 45 or 30/60*)
- ❑ Pencils and/or leads with holder - from 4H to 4B (*not mechanical pencils*)
- ❑ Pencil sharpener or lead pointer, and Sandpaper pad for beveling pencil
- ❑ Compass and/or circle templates
- ❑ Erasers: white, and kneaded
- ❑ Black metal binder clips (*small-size*) for mounting drawings

**MISCELLANEOUS**

- ❑ Drafting lamp, adjustable
- ❑ Small pocket-size measuring tape, 8' or 10' (*from hardware store*)
- ❑ Scissors, bond paper, white-out, scotch tape (*pref. tape that can be repositioned*)
- ❑ Photographic equipment and supplies