

## **ARC 595S Advanced Design – Integrative Studio**

**School of Architecture | The University of Texas at Austin | Spring 2019 | MW 1-5pm, F 1-3pm**

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### **TIMBER IN THE CITY**



#### **COURSE DESCRIPTION**

Integrative Studio emphasizes architecture as a tectonic expression. Projects are expected to address the full range of potential issues embodied in an architectural design; however, aspects that directly impact how projects exist in the physical environment, including site relationships and materiality/construction, will be a particular concentration. Therefore, the studio will have a strong focus on the design implications of technical issues, particularly their potential for design generation and as a repository of meaning. In addition, the thoughtful design and craftsmanship of presentation documents at all phases and scales will be emphasized.

Issues of construction and assemblies are framed within a set of concerns that are present in any type of construction, such as expansion & contraction, moisture infiltration and evacuation, ventilation, primary and secondary structure, logic of connections, differential settlement, etc. Particular attention will be given to the nature of detail drawings, and the final product produced by the students will result in a presentation package that will be comprehensive in content and scale.

#### **PROJECT DESCRIPTION**

##### **Introduction**

This Integrative Studio will be based on the competition brief of the TIMBER IN THE CITY 3: Urban Habitats Competition by The Association of Collegiate Schools of Architecture (ACSA). The competition is a partnership between the Binational Softwood Lumber Council (BSLC), the Association of Collegiate Schools of Architecture (ACSA), and the School of Constructed Environments (SCE) at Parsons School of Design. The program is intended to engage students to imagine the transformation of our existing cities through sustainable buildings from renewable resources, offering expedient, affordable construction, innovating with new and traditional wooden materials, and designing healthy living and working environments. This is the third competition in the TIMBER IN THE CITY series, and focuses this year on the interrelationship between housing, healthy, early childhood education, and climate change.

##### **The Challenge**

The competition challenges participants to re-imagine a vacant waterfront site in Queens, New York as a vibrant and vanguard model of healthy, biophilic living for the future of the city. Embracing new structural and ecological possibilities of wood construction, entrants will design a midrise, mixed-use complex that includes affordable housing, a large community wellness facility, and an early childhood education center, all interlaced with a new exterior public

waterfront space. Entrants are challenged to propose construction systems in scenarios that draw optimally on the performance characteristics of not one but a variety of wood technologies, and are encouraged to think about the site as a testing ground for socially, materially, and environmentally progressive and innovative models of sustainable urban living.

The programs for this mixed-use development are composed to challenge students and educators to think creatively and critically about the way in which choices about building materials, and the interrelationship of interior space and the exterior environments frame long-term consequences for the health of urban environments. Housing is the largest component of the competition program and presents an opportunity to look closely at the way timber construction can be used effectively in creating buildings based on smaller cellular units. A community wellness and sports facility complements the housing, and offers larger community and collective spaces that will require larger structural spans. An early childhood education center, for children from 6 weeks to 5 years old, calls attention to the critical role these institutions play in the long-term vitality and development of a community.

This third edition of the TIMBER IN THE CITY considers a site in Queens, just south of the Queensborough/Ed Koch Bridge. Overlooking the east river, with views to Roosevelt Island and Manhattan, the vacant site can be understood as a segment within a larger chain of mixed-use waterfront development in the Borough, including the Hunters Point and Annabel Basin projects underway to the south, and stretching south to Brooklyn and north to the Bronx. These new approaches to affordable housing stand in contrast to the NYCHA Queensbridge Housing development to the north. Constructed in 1939, it is one of the largest public housing complexes in North America. Along with the adjacent Queensbridge Park, it reflects nearly century-old ideals of living, construction, affordable housing, and landscape which will be reconsidered and re-imagined in this competition. This site has a unique mixed-use zoning designation and an ample allowable FAR. The competition program does not maximize this FAR. Instead, it is to be considered the first of a phased development of this significant site. Competitors are required to anticipate the future phased build-out of this site to utilize the full FAR as a condition of the competition design.

### **Timber**

The competition challenges participants to interpret, invent, and deploy numerous methods of building systems, with a focus on innovations in wood design on a real site. For thousands of years, solid wood has been used as a building material. Modern timber products and systems have greatly expanded the potential uses of this historic material. Timber is an ideal green building material: it is well suited for broad high-performance characteristics in strength and energy efficiency; and wood is an economic driver to maintain forests and protect jobs in rural communities.

### **Criteria for Judging**

Criteria for the judging of submissions will include: timber/wood as the primary structural material, creative and innovative use of timber/wood in the design solution, successful response of the design to its surrounding context, the creative and clear approaches to designing a healthy urban mixed-use environment with timber as a central material, and successful response to basic architectural concepts such as human activity needs, structural integrity, and coherence of architectural vocabulary.

More information about the competition can be found at: [www.timberinthecity.com](http://www.timberinthecity.com)

### **LEARNING OUTCOMES**

The following learning objectives from previous semesters are listed below. It is expected that significant further development in these areas will occur throughout the entire range of activities associated with this course.

- *Design Composition Skills*: Developed through three-dimensional architectural form and space, both exterior and interior; building envelope
- *Design Integration Skills*: Demonstrated through creative engagement with issues of materiality, structures, construction, and environmental systems
- *Site Analysis and Design*: Developed through the creative engagement with relevant contextual; environmental and programmatic factors underlying the project
- *Critical Thinking*: Quality of conceptual and critical thought; learning from precedents; research skills
- *Graphic Skills*: Quality of presentation; clarity of communication; appropriateness of media strategy and level of skill displayed
- *Collaborative and Leadership Skills*: Demonstrated through the active engagement in all activities of the studio

## STUDIO CULTURE

The University of Texas at Austin School of Architecture believes in the value of the design studio model. Studio learning encourages dialogue, collaboration, risk-taking, innovation, and learning-by-doing. The studio offers an environment where students can come together to ask questions and make proposals, which are developed and discussed among classmates, faculty, visiting professionals, and the public-at-large. Studio learning offers intensive one-on-one instruction from faculty members, and provides the opportunity for each student to develop his/her critical thinking skills and spatial and material sensibilities. The design studio offers a synthetic form of education, where project-based learning becomes the foundation for developing an understanding of and commitment to the school's core values — broadmindedness, interconnectivity, professionalism, exploration and activism — all in service of architecture's fundamental mission: to improve the quality of the built and natural environments.

<https://soa.utexas.edu/programs/architecture/architecture-studio-culture>

## DESIGN CONVERSATIONS

The School of Architecture offers a wide range of opportunities for students to extend the design conversations taken place in studios (Lecture Series, Goldsmith Talks, Exhibitions, etc.). Students are encouraged to participate and be engaged. Specifically, all students in studio are expected to attend all Jessen Lectures (three per semester by lead practitioners from around the world). The lectures and the group discussions in studio that follow are important for the holistic education of intellectually engaged students and participation will have an impact on students' grades (see below).

## EVALUATION CRITERIA

While each project contains certain quantifiable elements for evaluation, a significant portion of each grade is derived from broader and more subjective criteria. Student work will be evaluated according to its rigor and evolution over the semester. Grades are subject to deductions for late arrivals, absences, and late or incomplete work at the discretion of the instructor. Grading for an assignment is broken into four components, each of which is given roughly equal weight:

### Pursuit:

the consistent and rigorous development and testing of ideas.

- The ability to formulate a query or thesis and pursue a self-determined concomitant method of inquiry
- The ability to identify and implement various processual mechanisms (software, sketch drawing and models, etc.) in the development of the design
- Initiative as demonstrated in work ethic – Does the student do what is asked; go beyond what is asked; direct their own efforts; eager to produce the next iteration of the design?

### Grasp:

the ideas and understanding of the project at hand and integration of knowledge introduced in companion courses.

- A strong and clearly stated design objective
- Spatial acuity as demonstrated in plan – including reasonable disposition of programmatic elements – and sectional development
- Synthetic and critical thinking; the ability to holistically organize a project as demonstrated through creative engagement with issues of materiality, structures and construction, structural and environmental system integration, building materials and assembly, sustainable practices, etc. in support of the design objective
- Structural competence and material sensitivity as demonstrated in wall thickness, floor plates, and assembly

### Resolution:

of the design objective; the demonstration of competence, completeness, and finesse in the final design presentation.

- Quality of presentation; clarity of communication; appropriateness of media strategy and level of skill displayed through the work presented at all stages of the design process; technical documentation

### Engagement:

the active participation in studio activities, leadership, collaboration, group discussions and reviews.

A student must earn a letter grade of C or better in order for the course to count towards a degree in the School of Architecture and to progress in to the next studio. A letter grade of C- will not satisfy degree requirements.

## GRADE DESCRIPTIONS

<b>A/A-</b>	<b>Excellent</b> Project surpasses expectations in terms of inventiveness, appropriateness, visual language, conceptual rigor, craft, and personal development. Student pursues concepts and techniques above and beyond what is discussed in class. Project is complete on all levels.
<b>B+/B/B-</b>	<b>Above Average</b> Project is thorough, well presented, diligently pursued, and successfully completed. Student pursues ideas and suggestions presented in class and puts in effort to resolve required projects. Project is complete on all levels and demonstrates potential for excellence.
<b>C+/C</b>	<b>Average</b> Project meets the minimum requirements. Suggestions made in class and not pursued with dedication and rigor. Project is incomplete in one or more areas.
<b>C-/D+/D/D-</b>	<b>Poor</b> Project is incomplete. Basic grasp of skill is lacking, visual clarity or logic of presentation are not level-appropriate. Student does not demonstrate the required competence and knowledge base.
<b>F</b>	<b>Fail</b> Project is unresolved. Minimum objectives are not met. Performance is not acceptable. Note that this grade will be assigned when students have excessive unexcused absences.
<b>X</b>	<b>Excused Incomplete</b> Can be given only for legitimate reasons of illness or family emergency. Simply not completing work on time is not an adequate cause for assigning this evaluation. It may only be used after consultation with the Associate Deans' offices and with an agreement as to a new completion date. Work must be completed before the second week of the next semester in which the student is enrolling, according to the School of Architecture policy.

## ATTENDANCE

Punctual and regular attendance is mandatory. Participation is expected. With three (3) unexcused absences, the student's final grade for the course will be lowered by a full letter grade. The final grade will be lowered by a full letter grade for each unexcused absence thereafter. Aside from religious observances, absences are only excused with written documentation of a medical issue or family emergency. The student is responsible for completing work missed due to excused absences and initiating communication with the instructor to determine due dates.

If a student is late (5 minutes after the start of class) three (3) times, it will be counted as one (1) unexcused absence. Students should notify the instructor prior to class if lateness or absence is known in advance. Students must notify instructors directly regarding lateness or absences; Asking a classmate to inform the instructor is not acceptable.

## RELIGIOUS OBSERVANCES

A student shall be excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for the purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University policy requires students to notify each of their instructors as far in advance of the absence as possible so that arrangements can be made.

By UT Austin policy, you must notify the instructor of the pending absence at least fourteen days prior to the date of a religious holy day. If you must miss a class, an examination, an assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

## **ACADEMIC INTEGRITY**

Students who violate University policy on academic integrity are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic integrity will be strictly enforced. Refer to the Student Conduct and Academic Integrity website for official University policies and procedures on academic integrity:

<http://deanofstudents.utexas.edu/conduct/academicintegrity.php>. University Code of Conduct:

<http://catalog.utexas.edu/general-information/the-university/#universitycodeofconduct>

## **MENTAL HEALTH AND SUPPORT SERVICES**

Taking care of your general well-being is an important step in being a successful student. If stress, test anxiety, racing thoughts, feeling unmotivated, or anything else is getting in your way, there are options available for help:

- In-house CARE counselor (see below)
- For immediate support
  - Visit/call the Counseling and Mental Health Center (CMHC):  
M-F 8am-5pm | SSB, 5<sup>th</sup> floor | 512-471-3515 | [cmhc.utexas.edu](http://cmhc.utexas.edu)
  - CMHC Crisis Line:  
24/7 | 512-471-2255 | [cmhc.utexas.edu/24hourcounseling.html](http://cmhc.utexas.edu/24hourcounseling.html)
- Free services at CMHC:
  - Brief assessments and referral services: [cmhc.utexas.edu/gettingstarted.html](http://cmhc.utexas.edu/gettingstarted.html)
  - Mental health & wellness articles: [cmhc.utexas.edu/commonconcerns.html](http://cmhc.utexas.edu/commonconcerns.html)
  - MindBody Lab: [cmhc.utexas.edu/mindbodylab.html](http://cmhc.utexas.edu/mindbodylab.html)
  - Classes, workshops, and groups: [cmhc.utexas.edu/groups.html](http://cmhc.utexas.edu/groups.html)

## **CARE PROGRAM**

Counselors in Academic Residence (CARE) Program places licensed mental health professionals within the colleges or schools they serve in order to provide better access to mental health support for students who are struggling emotionally and/or academically.

Abby Simpson (LCSW) is the assigned CARE counselor for the School of Architecture. Faculty and staff may refer students to the CARE counselor or students may directly reach out to her. Please leave a message if she is unavailable by phone.

Abby Simpson, LCSW | BTL 114B | 512-471-3115 (M-F 8am-5pm)  
[https://cmhc.utexas.edu/CARE\\_simpson.html](https://cmhc.utexas.edu/CARE_simpson.html)

## **STUDENTS WITH DISABILITIES**

Students with disabilities who require special accommodations must obtain a letter that documents the disability from the Services for Students with Disabilities area of the Office of the Dean of Students (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). This letter should be presented to the instructor in each course at the beginning of the semester and accommodations needed should be discussed at that time.

<http://diversity.utexas.edu/disability/>

## **SECURITY, SAFETY, AND THE STUDIO**

The studio is an exceptional learning environment. Since it is a place for all, it necessitates the careful attention to the needs of everyone. All spraying of fixative, spray paint, or any other substance should be done in the shop. Security is a necessary component for a studio that is accessible to you and your colleagues 24 hours a day, 7 days a week. Do not leave your studio without your studio key and do not leave your studio unlocked. Hold yourself and your studio mates accountable for the security of your shared space.

The studio is an opportunity to apply sustainability principles, being mindful to recycle and reuse to reduce material consumption at UTSOA. Recyclable materials should be placed in blue bins or any other containers with white bags. The Material Exchange, a give-and-take system for students to donate materials and take what they need for studio and fabrication coursework, is available throughout the semester to all UT students in the UTSOA Technology Lab. All unwanted, reusable materials should be brought to the Material Exchange station in the Technology Lab at the end of the semester.

## **BCAL**

Concerns regarding the safety or behavior of fellow students, Teaching Assistants (TA), or Professors can be reported to the Behavior Concerns Advice Line (BCAL): 512-232-5050. Calls can be made anonymously. If something doesn't feel right, it probably isn't. Trust your instincts and share your concerns.

## **EMERGENCY EVACUATION**

In the case of emergency evacuation:

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Students should familiarize themselves with all exit doors of each classroom and building they may occupy. Remember that the nearest exit door may not be the one used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class. In the event of an evacuation, follow the instruction of faculty or class instructors.
- Reentry into a building is prohibited unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services offices.

Information regarding emergency evacuation routes and emergency procedures can be found at:  
[www.utexas.edu/emergency](http://www.utexas.edu/emergency)

## **RESOURCES**

### **Reference Books**

Allen, Edward, *How Buildings Work*  
Allen, Edward, *The Architect's Studio Companion: Rules of Thumb for Preliminary Design*  
Brown, G.Z., *Sun, Wind & Light: Architectural Design Strategies*  
Ching, Francis, *Architectural Graphics*  
Ching, Francis, *Building Codes Illustrated*  
Ching, Francis, *Building Construction Illustrated*  
Ching, Francis, *Building Structures Illustrated*  
Herzog, Thomas, Krippner, Roland, and Werner Lang, *Facade Construction Manual*  
Kieran, Stephen, and James Timberlake, *Refabricating Architecture: How Manufacturing Methodologies are Poised to Transform Building Construction*  
Ramsey/Sleeper, *Architectural Graphics Standards*

### **Books on Timber Construction**

Dangel, Ulrich, *Turning Point in Timber Construction*  
Green, Michael, *Tall Wood Buildings: Design, Construction and Performance*  
Herzog, Thomas, *Timber Construction Manual*  
Hugues, Theodor, *Timber Construction: Details, Products, Case Studies*  
Kaufmann, Hermann, *Building with Timber: Paths into the Future*  
Kaufmann, Hermann, *Manual of Multi-Storey Timber Construction*  
Kolb, Josef, *Systems in Timber Engineering*  
Mayo, Josef, *Solid Wood*  
Müller, Christian, *Laminated Timber Construction*  
Sauer, Marko, Kaufmann, Hermann IZM: *Illwerke Zentrum Montafon*  
Steiger, Ludwig, *Basics - Timber Construction*

### **Periodicals**

Detail Magazine  
El Croquis  
The Plan  
GA: Global Architect

## SCHEDULE

<b>Week 01</b>	W	1/23	Studio Lottery	E01 issued	01 Detailing	Details Reference Material Precedents
	F	1/25	Introduction/Studio Setup			
<b>Week 02</b>	M	1/28	Detailing	<i>Lecture Claire Agre</i> <b>E01: Detailing due</b> , E02 issued	02 Site Analysis/Research	Site Documentation Site Analysis Site Model
	W	1/30	<b>Pin-up (Gol 2.110)</b>			
	F	2/01	Discussion/Site Analysis			
<b>Week 03</b>	M	2/04	Site Analysis + Project Research	<b>E02: Site Analysis due</b> , E03 issued <i>Lecture Deborah Berke</i>	03 Programming	Precedent Research Systems Research Material Research
	W	2/06	Site Analysis + Project Research			
	F	2/08	Site Analysis + Project Research			
<b>Week 04</b>	M	2/11	Site Analysis + Project Research	<b>E03: Programming due</b> , E04 issued <i>Lecture Stih and Schnock</i>	04 Concept	Concept Drawings Study Models
	W	2/13	<b>Pin-up (Gol 2.110)</b>			
	F	2/15	Discussion/Programming			
<b>Week 05</b>	M	2/18	Programming	<i>Lecture Joan Busquets</i> <b>E04: Design Concept due</b> , E05 issued	05 Schematic Design	Spatial System Structural System
	W	2/20	<b>Pin-up (Gol 3.118)</b>			
	F	2/22	Discussion/Design Concept			
<b>Week 06</b>	M	2/25	Design Concept	<i>Lecture Michael Murphy</i> Gregory Brooks, ArchE 2:00-5:00pm	06 Systems Integration	Structural System Mechanical Systems
	W	2/27	<b>Pin-up (Gol 3.118)</b>			
	F	3/01	Discussion/Schematic Design			
<b>Week 07</b>	M	3/04	Schematic Design	<i>Lecture kstudio</i> <b>E05: Schematic Design due</b> E06 issued	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	3/06	Structure Workshop (Gol 3.100)			
	F	3/08	Schematic Design			
<b>Week 08</b>	M	3/11	Schematic Design	Guest critic tbd <b>E06: Systems Int. due</b> , E07 issued <i>Lecture William O'Brien</i> <i>Instructor at ACSA Conference</i>	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	3/13	<b>Mid-Term Review (Gol 2.110)</b>			
	F	3/15	Review Response/Work Day			
<b>Week 09</b>	M	3/18	<b>Spring Break</b>	Guest critic tbd <b>E06: Systems Int. due</b> , E07 issued <i>Lecture William O'Brien</i> <i>Instructor at ACSA Conference</i>	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	3/20				
	F	3/22				
<b>Week 10</b>	M	3/25	MEP Workshop (Gol 3.100)	Guest critic tbd <b>E06: Systems Int. due</b> , E07 issued <i>Lecture William O'Brien</i> <i>Instructor at ACSA Conference</i>	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	3/27	<b>Pin-up (Gol 3.118)</b>			
	F	3/29	Design Development/No Class			
<b>Week 11</b>	M	4/01	Design Development	<i>Competition Registration Deadline</i> <i>Lecture Elena Manfredini</i> <i>Graduate Open House</i>	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	4/03	Design Development			
	F	4/05	Design Development			
<b>Week 12</b>	M	4/08	Design Development	<b>E07 Design Development due</b> E08 issued	07 Design Development	Building Envelope  Plans/Sections/Elevations 1/8" Models 1/8" Wall Sections/Details Systems Diagrams
	W	4/10	<b>Review (Gol 2.110)</b>			
	F	4/12	Discussion/Work Day			

<b>Week 13</b>	M	4/15	Final Production and Presentation		08 Final Presentation	Final Production
	W	4/17	Final Production and Presentation			
	F	4/19	Final Production and Presentation			
<b>Week 14</b>	M	4/22	Final Production and Presentation			
	W	4/24	Final Production and Presentation			
	F	4/26	Final Production and Presentation			
<b>Week 15</b>	M	4/29	Final Production and Presentation			Site Plan
	W	5/01	Final Production and Presentation	Final Drawings due <i>Lecture Ana Maria Leon</i>		Plans/Sections/Elevations 1/8", 1/4"
						Models 1/8", 1/4"
	F	5/03	Final Production and Presentation			Wall Sections 1/2", 1"
<b>Week 16</b>						Details 3" or larger
	M	5/06	Final Production and Presentation	Final Model due		Diagrams
	W	5/08	Final Reviews	<b>E08: Final Presentation due</b>		Axonometric/Perspectives
	F	5/10	Final Reviews			
	W	5/15	Exit Interviews			
	W	5/22		<i>Competition Submission Deadline</i>		

**Note:**

This schedule is subject to change and will be adjusted accordingly. Additional pinups and intermediate requirements will be announced as the semester progresses. Please be available during class time throughout the semester.