

COVID HEADER

If Texas Tech University campus operations are required to change because of health concerns related to the COVID-19 pandemic, it is possible that this course will move to a fully online delivery format. Should that be necessary, students will need to have access to a webcam and microphone for remote delivery of the class.

ARCH 5501: Architectural Design Studio I + ARCH 7000: Research (graduate)

College of Architecture, Texas Tech University
Fall, 2020

Instructors:

Coordinator, Associate Professor Peter Raab, peter.raab@ttu.edu [Office Hours: by appointment only]
Assistant Professor Dr. Peng Du, peng.du@ttu.edu [Office Hours: by appointment only]

Meeting Times:

M, W, F, 1:00-4:50p [Section 312 (online instruction only, virtual meetings via Zoom + Miro)]
M, W, F, 1:00-4:50p [Section 305 (hybrid instruction, Room ARCH 702, and online via Zoom + Miro)]

densifying downtown lubbock: *designing for energy, ecology, and people.*

TTU Catalog Description:

ARCH 5501 (5 Semester Credit Hours)

Topical studio that explores design, theoretical and/or technological issues that affect current architectural thought and practice. F, S.

ARCH 7000 (1 Semester Credit Hour)

Research course in which students will learn and demonstrate the core skills necessary to draft a thesis, or generate an alternative research project.

Course Description/Studio Brief

The first semester of the new graduate curriculum emphasizes the integration of design research within contemporary architectural practice. With the introduction of novel design methodologies, students will design large-scale architectural interventions to enliven and enrich the empty space within an existing urban fabric. Explorations into societal, ecological and environmental impacts of architecture. Echoing architectural practice, the design project will be developed collaboratively on a design. This course prepares students to engage with different theoretical stances and alignment with specific methods of research to create a basis for future architectural design studios and contemporary practice. The studio project will investigate the potential impact of tall buildings in downtown Lubbock.

Critical Context.

Over the coming decades, cities and buildings around the globe will need to develop strategies to cope with future stresses associated with a growing population, increased energy consumption and healthy environments that effect the livelihood of the citizens - air pollution, water scarcity, desertification and loss of wilderness habitat. The United Nations forecasts that 70 percent of the world's projected nine billion population will be urbanized by the year 2050, up from 51 percent of seven billion urbanized as of 2010. The impact of this total figure of 2.8 billion people moving into cities over the next 40 years is perhaps better understood at the annual rate of 70 million people per year, or the daily rate of nearly 200,000 people. As a global species it means we need to build a new or expanded city of more than one million people every week for the next 40 years to cope with this urban growth. At the same time, the planet is rapidly experiencing climate change, and every indication is that there is an urgent need to slow the rate of planetary warming within less than a decade to avert catastrophic consequences. Therefore, the cities we build today urgently need to minimize carbon emissions wherever possible, at both the building and urban scale.

Increasing density in cities is now widely accepted as necessary for achieving more sustainable patterns of life to reduce carbon footprint and thus combat climate change. The concentration of people in denser cities – sharing space, infrastructure, and facilities – offers much less carbon footprint than the expanded horizontal city, which requires more land usage as well as higher carbon emissions in infrastructure and mobility. Tall buildings are not the only solution for achieving density in cities but, given the scale of these major population shifts, the “vertical city” is increasingly being seen as the most viable solution for many urban centers. However, we must do more than simply increase density or reduce the carbon footprint, we need to integrate tall buildings into the urban and societal fabric, such that they become part of the physical and cultural infrastructure as never before. Transportation, public facilities, green space and commercial functions all need to be holistically synchronized and pivoted toward positive, sustainable outcomes for a much broader swath of society.

These environmental problems require a broad, global understanding of ecological systems, smart materials, and innovative technological leaps made in engineering, computation and theory, while requiring a local perspective of the unique dynamic of a particular topographical, climatic, cultural or political context.

Cultural Context.

Set in the Hub City, this design project seeks to explore alternative design approaches for tall buildings; to create high-rise buildings that are inspired by the cultural, physical and environmental aspects of place. Lubbock, the 11th largest city in Texas, and second largest west of Interstate Highway 35, Lubbock's population has increased by 13.61% since the most recent census, which recorded a population of 229,573 in 2010. The larger metropolitan area is expected to increase 7% through 2022 to 318,679. On May 11, 1970, one of the most destructive tornadoes in the nation's history struck downtown Lubbock affecting a 25-square mile area. In its wake, over 400 homes were destroyed, thousands damaged, 250 businesses were severely damaged and the 271-foot Great Plains Life Building was left with a visible twist still visible today. This major weather event, exacerbated the larger downtown exodus occurring nationwide since the late 1950's, and the construction of Loop 289 which was completed in 1972. For almost fifty years, 'downtown' Lubbock has moved mostly south and west, emptying much of the city center. While most major cities have seen a resurgence in their downtown core for the past 20 years, Lubbock has only just recently seen development happening again downtown, with Lubbock's new City Hall (Citizens Tower) opening in May, 2020 and the massive Buddy Holly Hall of Performing Arts Center expected to be complete in early 2021. With the completion of the 2019 Sustainable Design Assessment Team (SDAT) report for Lubbock, many more projects are now slated for what could be the next chapter for our city on the plains.

Architectural design is intrinsically optimistic in its speculation and imagines a future that has yet to be. How can you design a new future for the next 50 years for Lubbock, Texas?

Design Prompt.

This research-based design studio will posit on the future of architecture. Through investigation, interrogation and iteration you will develop the design for a vertical tower, within a horizontal city. Not to ascribe to a singular, object-centric approach to architectural design, but to promote the need to build more efficient, dense cities, reducing our current desire for sprawl, which builds on arable land, and increases our dependence on roads.

The 'site' for your interventions will focus on repurposing the large-size parking slots, the "space between" buildings in Downtown Lubbock along the north-south corridor of Avenue L and Avenue K between the Marsha Sharp Freeway and 15th Street. (see map). Students will work in pairs to develop the design of a tall building, or a cluster of tall buildings, plus the supporting infrastructure and landscape within the site. Ideations of an 'augmented landscape', as Thom Mayne calls it, goes beyond the 'modern' notion of single-use, separation of programs within a single plot, to begin to posit a more 'post-modern' and layered notion of differentiated space that thickens space and use from the single, flat plane into a complex hybrid of 'mixed-use'.

Students will be free to determine the size, height, function, accommodation and responsibilities of the building(s), according to their urban mapping, neighborhood studies, and programmatic research. It is likely that the building(s) will be mixed-use in nature. Possible influential factors on detailed program (in no particular hierarchy) might be site area, urban grain, neighboring buildings, city requirements, community requirements, the commercial market, social responsibility, sustainability, aesthetics, proportions, plot ratios etc. Students should devise design solutions to respond to the local climatic, social, cultural and financial conditions.

A series of guest lectures on tall buildings and sustainability will be added to support this studio (see the Course Schedule for detail). Each project is encouraged to be forward-thinking, embracing the very latest technologies (including future technologies) to allow advancement in structural design, formal strategies, productive skins, multi-valent functionality and design for adaptability, integrated systems and an expression.

Redefining Excellence in Design.

Just last year the American Institute of Architects (AIA) overwhelmingly ratified the Resolution for Urgent and Sustained Climate Action to galvanize architects to actively address climate change within their practices. As a profession, we have the responsibility to work globally to reduce operational and embodied greenhouse gas production with passive design techniques, employ energy efficiency measures, adapt existing buildings, and specify low-impact building materials that increase human health and productivity while withstanding the effects of a changing climate. With nearly half our lives being spent in our homes, even conceptual development of an architectural project should evince ideas of daylight, healthy interiors, thermal comfort and bio-climatic responsiveness of our designs.

The Framework for Design Excellence embraces the former COTE (the Committee of the Environment) Top Ten, as the basis for all exceptional projects. The demonstrates the organization's and the professions commitment to important issues at-large. Integration, Equity, Ecology, Economy, Energy, Water, Wellness, Resources, Change and Discovery - to inspire sustainable, resilient and inclusive design from the architecture community. With regards to the next Sandy, how does the design anticipate passive survivability, restoring or adapting function in the face of stress or shock, such as natural disasters, blackouts, etc.? How does the structural system and massing allow for flexibility and future adaptability? How can our buildings become not just Net-Zero, but also carbon sinks?

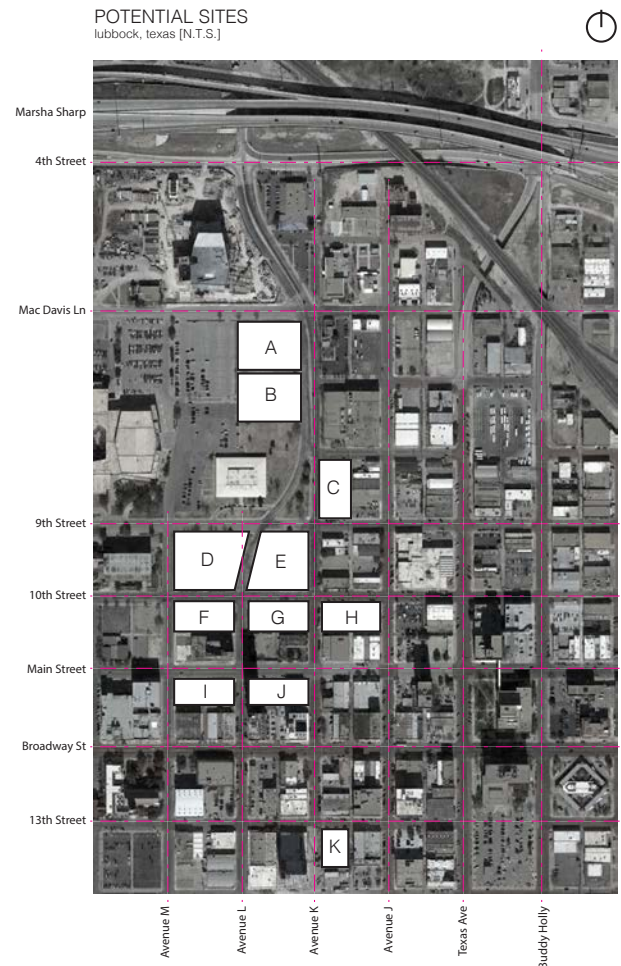




Fig 1: Lubbock's Art District of a First Friday (left), and the new Buddy Holly Hall of Performing Arts and Sciences

Further Prompts.

1. Can speculative architecture enliven and enrich a derelict downtown through the provocation of change?
2. What types of programs, spaces and interventions are needed?
3. How is a particular typology impacted by a multiplicity of forces, from the literal (gravity + material) to cultural and social, and how can we develop an architecture that can express these multi-varied and omnipresent concerns?
4. How does culture, place and climate play into housing norms and rituals?
5. How can material choice relate to existing contextual history while adding to the ever-evolving idea of place?

Student Learning Objectives

Disciplinary knowledge gained through the successful completion of this course will enable conveyance of:

1. Design Processes. Demonstrating the ability to conceive of architectural concept, iterate through continual analysis and improvement of a design through rigorous, creative-thinking and development of both the pragmatic and poetic through hand-drawing, physical model-making and digital representational tools.
2. Form and Space. Defined by systems of structure, enclosure, and circulation, hierarchical organization, and composition, articulated by principles of scale, and theories of proportion.
3. Precedents. Locate and determine applicable examples of exemplary design solutions found in professional and academic works.
4. Context. Thorough analysis of larger ecological, environmental and climatic issues to situate ideations within proper physiological, psychological and societal territories.
5. Research. Initiate student-led design investigations to engage different theoretical stances and propel future practice and innovation by creating new knowledge and align those stances with methods of contemporary research and practice.

Student Performance Objectives

Professional knowledge to be gained from the successful completion of this course will be:

1. Site & Environment. Ecological and environmental design strategies must consider bio-climate, solar orientation and insolation, wind direction, temperature, precipitation and thermal comfort requirements across the spectrum of interior and exterior conditions.
2. Program. The planning and accommodation of human physical and psychological needs, identifying spatial requirements and relationships within a large-scale 'mixed-use' project that connects within the urban fabric.
3. Technical Acumen. Methods of construction, materials, structural systems and detailing to demonstrate an understanding of preliminary design documentation of an architectural ideation.
4. Systems Integration. Understanding of specific thermal comfort conditions and how to implement passive and active strategies into a thorough design scheme.



Fig 1: Solar Carve Tower, NYC. [Studio Gang Architects]

I. COURSE CONVEYANCE

Means of Evaluation:

Deliverables. Well-crafted drawings, models, concepts and rigorous development of an architectural idea. As the delivery method for much of this course (online + hybrid) will be digital via Zoom and Miro, all work must be carefully composed for the screen. Photographed models and renderings should be post-produced to high quality.

Methods of Assessment. Expectations of the deliverables set forth above shall be completed in a timely manner, assessed through regular interaction, participation, and criticism of design output with the instructors. Students are expected to further their design through a process which is not necessarily linear, but flexible (somewhat circular) design process as each design iteration leads to greater clarity, resolution, definition, and specificity. It is important to note that this process does not always move from general to specific, as design processes will often require iteration, testing, and re-design throughout the semester. Students will be required to present the process of their work (*printed* digital drawings and *constructed* physical models) at the end of each phase, at final review, and submit design documentation. Be prepared at the beginning of class-time. There will be unscheduled pinups, discussions, presentations, and critiques as needed to facilitate work progress.

Assignments. Each student is responsible for reading, understanding, and absorbing all assignments, references, precedents, and other content presented in studio. Given the extensive scope of the course content, and the nonlinear necessities of developing architecture, there may be multiple assignments occurring at any one time. All assignments must be completed in a timely manner. Assignments are cumulative, and therefore students unable to maintain the speed of the schedule may need to withdraw from the course. Extensions to due dates will not be granted unless circumstances. Substantial grade reduction will occur if work is received late or incomplete.

Design Documentation. Each student is responsible for submitting a comprehensive on-going record of design process materials generated throughout the semester. This will include: design process sketches, scans of markup prints, analytic diagrams, final technical drawings, and high-quality digital photographs of all physical models. Digital files will be uploaded to your designated OneDrive folder according to specified to specified file-types and file naming formats, announced on the studio web site.

Teaching Methods/Studio Methods:

Methodology. This graduate level design studio promotes the strategies, tactics, and techniques of making architecture as a discourse between theory and practice. Emphasis is placed on a critical approach to design. Architecture is presented as a system of systems, synthesized into a collaborative design project for a tall building in downtown Lubbock. A wide range of variables include not only the technical and the pragmatic, but also aesthetic, theoretical, formal, spatial, and sequential considerations. In addition to the specific materials required for this studio, you will develop a clear process and position (critical ideology) within the field of architecture. As an ongoing critical search, you should not be seeking off-the-shelf answers, but instead asking better questions. This studio will be integrative in approach as the project develops from urban and formal strategies translate to structural, material and the detail. The art of detailing is an exercise in judgment inspired by intellect and tempered by care. Several complex systems [programmatic, environmental, site, accessibility, structural, performance, and building envelope assemblies] will be investigated, iterated, and technically documented to create an integrated architectural project. The studio inculcates a high standard of proficiency, pride, and confidence in producing high-quality work.

Criticism. Managing and implementing criticisms is the responsibility of the student. Students are expected to listen, understand, accept, study, and apply criticisms to their work. Critiques from the instructor, outside reviewers, and other classmates during critiques should be perceived as a constructive analysis of the work and/or process, not as a personal attack. In order to receive effective criticism, students must continuously present progress of their work as printed and/or refined digital drawings (at correct architectural scale). Only significant new work that contributes and moves forward the progress of the project will be discussed. Minor changes, repeated works, or verbal descriptions of intentions will not be critiqued. All previously completed work (sketches, prints, models and digital files) must be available in studio because the design process demands comparative reference to these works.

Productivity. Time management and a high level of consistent production is key to success in this studio. Students are expected to invest a significant amount of time working on the studio project outside of class time. Experience has shown that students who work in studio before and/or after class hours and on weekends on a consistent basis

have a greater degree of success in the course because they can interact, discuss, clarify, and exchange ideas or methods with peers.

Representation. Students must demonstrate the ability to employ appropriate representational media to convey essential architectural ideas at each stage of the design process through physical models, orthographic and axonometric drawing, and rendered imagery. Every mode of representation for comment/criticism must be a precise, well crafted, and intentional representation of architectural ideation.

Model making. Finely crafted and intentional model-making skills are required as physical models will be built, analyzed, and rebuilt throughout the semester. Architectonic construction should be representative through joinery, detail, and intentional material choice. Even though much of this course will be taught online, it is imperative that students develop physical models to test ideas and iterate. With online presentations at the conclusion of each of the class phases, high-quality photographs of your models are required, and the only way to truly convey your intention.

Drawings. High-quality digital drawing techniques utilizing vector-based drawings post-produced in either a CAD program or Adobe Illustrator. NO crudely exported drawings from Rhino, Revit, or similar sources are unacceptable. All drawings must show sophisticated and appropriate line weights ranging from heavy, medium, and thin; and representational line types of solid, dashed, and dotted dependent upon representational intention. Tones and color are supplemental expressive techniques that can enhance the reading of the drawings but shall not obscure or as a substitute for properly line-weighted drawings. In the case of technical documentation, drawings require correct US material designations, dimensions and keyed labelling. While plans and sections may begin as basic cuts from a 3d digital model, iteration and refinement must be within a 2d CAD program (Not Illustrator!) to reconstruct, redraw and redefine architectonic intentionality.

Renderings. Perspectives, section perspectives and axonometrics must include line information. Post-production is required to represent intention and proper scale (people), context (imagery from site) and the experiential (materiality and light). Off the shelf (clicked) rendering is discouraged. Analog and digital drawing will be employed at various times throughout the semester, and a specific hybrid drawing workshop will be utilized to combine physical and digital techniques with drawing, imagery and precision. The intensive production throughout the entire semester is essential to success in this studio. Poor craftsmanship in any of the above category will result in a substantial deduction of grade.

Professionalism in the Studio. As a graduate-level studio, maturity and professionalism is expected, similar to an office environment. Collaboration between students is essential for the creation of a vibrant studio culture, and sharing of technical knowledge is encouraged. Therefore, all of the following behaviors are prohibited during class hours:

1. No walking in and out of formal lectures/discussions during studio.
2. No working on assignments for other classes during studio. (Including GSA duties).
3. No disruptive behavior.
4. Internet usage is limited to studio work communications and research purposes only.

*****Any unprofessional behavior observed during studio may result significant grade reduction for the semester.*



Fig 3: Lubbock, Then (1970) and Now (2020). What's Next?!

Recommended Texts:

Books on Reserve COA Library. The resources below are by no means complete, but should give you a basis for supplementing your existing knowledge on architecture, structure, environmental systems, programming, detailing, and assemblies. Other readings may be assigned by your professor throughout the semester.

Digital References:

1. Council on Tall Buildings and Urban Habitat (CTBUH) website (www.ctbuh.org) which, in itself, contains links to many other tall building-related websites.
2. Lubbock Sustainable Development Assessment Team (SDAT), Published Jan 2019: https://issuu.com/aiacxd/docs/lubbock_sdat_report1.25.19
3. American Institute for Architecture (AIA), Framework for Design: Excellence <https://www.aia.org/re-sources/6077668-framework-for-design-excellence>

Tall Building References:

1. David Parker + Antony Wood. THE TALL BUILDINGS REFERENCE BOOK
2. Philip Oldfield. THE SUSTAINABLE TALL BUILDING: A DESIGN PRIMER
3. Joana Carla Soares Gonçalves. THE ENVIRONMENTAL PERFORMANCE OF TALL BUILDINGS
4. Michael J. Short. PLANNING FOR TALL BUILDINGS
5. James Parakh + Daniel Safarik + Peng Du. THE SPACE WITHIN: SKYSPACES IN TALL BUILDINGS

Technical References:

1. Allen, Edward + Patrick Rand. ARCHITECTURAL DETAILING: FUNCTION, CONSTRUCTIBILITY, AESTHETICS, 3RD EDITION. also online access.
2. Allen, Edward + Joseph Lano. THE ARCHITECT'S STUDIO COMPANION: RULES OF THUMB FOR PRELIMINARY DESIGN.
3. Allen, Edward. FUNDAMENTALS OF BUILDING CONSTRUCTION: MATERIALS AND METHODS.
4. Alread, Jason + Thomas Leslie + Rob Whitehead. DESIGN-TECH: BUILDING SCIENCE FOR ARCHITECTS.
5. Bell, Victoria Ballard + Patrick Rand. MATERIALS FOR DESIGN 2.
6. Ching, Francis. BUILDING CODES ILLUSTRATED. A GUIDE TO UNDERSTANDING THE 2015 INTERNATIONAL BUILDING CODE. also online access.
7. Ching, Francis. BUILDING CONSTRUCTION ILLUSTRATED.
8. Ching, Francis. BUILDING STRUCTURES ILLUSTRATED. also online access.
9. Ching, Francis. GREEN BUILDING ILLUSTRATED. online access only.
10. Deplazes, Andrea. CONSTRUCTING ARCHITECTURE: MATERIALS, PROCESSES, STRUCTURES. 3RD EDITION.
11. Ford, Edward R THE ARCHITECTURAL DETAIL. also online access.
12. Hall, Dennis J. ARCHITECTURAL GRAPHIC STANDARDS.
13. INTERNATIONAL BUILDING CODE 2018 (IBC).
14. Killory, Christine + Rene Davids. DETAILS, TECHNOLOGY, AND FORM.
15. Killory, Christine + Rene Davids. DETAIL IN PROCESS.
16. Killory, Christine + Rene Davids. DETAILS IN CONTEMPORARY ARCHITECTURE
17. Kwok, Alison. THE GREEN STUDIO HANDBOOK, 2ND EDITION
18. Lechner, Nobert. HEATING COOLING LIGHTING SUSTAINABLE DESIGN METHODS FOR ARCHITECTS.
19. Leonardi, Nicola. NEW FORMS: PLANS AND DETAILS FOR CONTEMPORARY ARCHITECTS.
20. Lewis, Paul + Mark Tsurumaki + David Lewis. MANUAL OF SECTION. (TTU online access).
21. McMorrough, Julia. MATERIALS STRUCTURES STANDARDS.
22. Moe, Kiel. THERMALLY ACTIVE SURFACES. New York: Princeton Architectural Press, 2010. (TTU online access).
23. Moscatelli, F., + Charles Gute. DIANE LEWIS: INSIDE-OUT : ARCHITECTURE NEW YORK CITY.
24. Schittich, Christian. BUILDING SKINS. also online access.
25. Schittich, Christian. GLASS CONSTRUCTION MANUAL.
26. Schittich, Christian. BUILDING SIMPLY.
27. Wachsmann, Konrad. THE TURNING POINT OF BUILDING : STRUCTURE AND DESIGN.
28. Wallick, Karl. KIERANTIMBERLAKE : INQUIRY.

Course Requirements.

Required Computer + Internet Connectivity. Students must provide and maintain their own laptop computer used for studio assignments. See the college website for minimum specifications. With much of the class being digital, including design review and desk critiques, a laptop with camera and microphone will be extremely important for conveying design ideas. Technical difficulties, viruses, corrupted files, crashes, server, or print bureau problems will not be accepted as excuses for not producing assigned work. All digital work should be regularly backed up.

Required Software. Using illegal copies of software violates ethical code and can cause unexpected results.

1. Adobe Photoshop, Illustrator, InDesign, and Acrobat. Illustrator is required for all 2D drawing output.
2. AutoCAD or Rhino can be used for general drafting.
3. Use the 3D software that you know the best for design modeling including: Rhino (and Grasshopper, strongly encouraged), AutoCad, ReVit, SketchUp, and form•Z 8.6.

Required Output Technologies.

1. It is strongly suggested that you have an 11 x 17 inkjet printer at your desk (in studio) for everyday studies (11 x 17 paper; inkjet cartridges).
2. Required Camera. digital or smart phone camera (minimum of 3 mega-pixel; 2048 x 1536 pixels).
3. Laser cutting, CNC & 3D printing COA Shop (tbd., depending on COVID restrictions).

Required Materials.

1. exhibiting: push pins, clips and tape for hanging work.
2. criticism: 12" & 18" wide rolls of white/yellow trace.
3. drawing: variety of pencils, water-based colored pens and markers.
4. measuring: Architect's Scale, Engineering Scale.
5. cutting: healing cutting board, metal straight edges, triangles, x-acto knife and olfa w/ blades.
6. modeling: basswood, birch plywood, foam-core, cardboard, chipboard, museum board and paper.
7. glue: non-toxic water-based glues such as Elmer's Glue-All, Elmer's Wood Glue, Sobo Glue, Tacky Glue, or hot glue stick guns (low and high heat).
8. paint: Golden Acrylic Gesso or Liquitex Gesso; high-quality water-based flat interior latex.

Important Notes:

With COVID restrictions for the Fall, 2020 semester, there will be limited access to the print shop, model shop and wood shop for all students (hybrid and online). You should still be prepared to create physical models during the iterative process throughout the semester in order to move your project forward. A workspace and materials listed above still apply to online course modalities, so please make accommodations. This doesn't mean that all models should be made of birch plywood, but paper models are acceptable. Craft is encouraged.

Attendance Policy

1. Students are responsible for attending all scheduled class meetings for the full class period. This applies to face-to-face AND virtual meetings.
2. Attendance requires each student to have their computer, tools, materials, and supplies available for all studio activities.
3. When you are absent you miss important course content that effects student performance. You will have to work harder to make up for any absences.
4. Absences will affect the final grade at the instructor's discretion
5. Violating a maximum of four absences for studio will require the student to drop the class or receive a grade of "F" in compliance with drop deadlines (see COA Attendance policy).
6. Absences are only for reasonable unforeseen circumstances such as getting sick or emergencies. If you are sick, please stay home. Inform the instructor directly.
7. Any absence is considered UNEXCUSED, unless it meets the criteria discussed in the TTU Student Handbook, Part II Community Policies, Section D: Class Absences (page 62) for the following:
 - a. Illness requiring an absence from class for more than one week.
 - b. Religious Holy Day Absences.
 - c. Student Absence due to Sponsorship of Student Activities and Off-Campus Trips.
 - d. See section II on specific COVID-19 Instructions related to attendance.

Grading.

Grading certifies that the student has clearly demonstrated a level of expertise for the design process and product, as required for each studio phase. Studio grading is not an exact mathematical assessment. It is based on years of experience and expertise in the criticism and judgment of student design process and final work. Production and hard work lead to improvement, and demonstrated improvement is a key component in final grading.

Grade definitions.

A (excellent) exceptional work, exceeding the requirements of the course, showing strong understanding, skills, effort, initiative, and independent resourcefulness.

B (good) performance above the norm; work demonstrates adequate understanding, skills, effort, initiative, and improvement beyond the minimum requirements of the course.

C (average) meets minimum requirements and demonstrates satisfactory understanding, skills, and effort; little initiative to investigate the problem without substantial prodding from the instructor; work shows minimal improvement.

D (inferior) work that does not satisfy minimum requirements, understanding, skills, and effort; initiative lacking; improvement not noticeable.

F (failure) does not meet requirements to the extent the student must repeat the course.

Plus and minus marks may be used to indicate higher and lower rating in each grade division for the purposes of averaging progress reports and final grades. A student who has shown clear successful improvement throughout the semester may be given the advantage in the case of borderline final grade averages.

++More on grading: TTU OP. 34.12 on Grading <https://www.depts.ttu.edu/opmanual/OP34.12.pdf>

The instructor(s) will issue four progress evaluations during the semester, after each studio phase. The following criteria will be utilized within this assessment:

1. Process/Rigor (development and articulation)
2. Craft/Precision (analog-digital representation)
3. Resolution (curricular integration)
4. Critical Ideology (research and critical thinking)
5. Professionalism (passion, dedication, timely submission of work, and attendance record)

Studio Phases. Five major phases will occur within the studio, each resulting with a formal review. As graduate students, full participation with all pin-ups, reviews and discussion are required. At the conclusion of phases 01, 02, 03 and 04 progress grades will be given to alert the students of their current standing. The phases are as follows:

01 SITE / RESEARCH: research + site analysis	15%
02 FORM / SCHEME: formal / scheme design	15%
03 BLDG / DESIGN I: structure + performance	20%
04 BLDG / DESIGN II: facade + synthesis	20%
05 FINAL: resolution	30%

Retention of Student Work. The College of Architecture reserves the right to retain, exhibit, and reproduce work submitted by students. Work submitted for a grade is the property of the college.

NAAB Criteria Met (NAAB 2014).

Realm C: Integrated Architectural Solutions. Graduates from NAAB-accredited programs must be able to demonstrate that they have the ability to synthesize a wide range of variables into an integrated design solution. Student learning aspirations for this realm include

- Comprehending the importance of research pursuits to inform the design process.
- Evaluating options and reconciling the implications of design decisions across systems and scales.
- Synthesizing variables from diverse and complex systems into an integrated architectural solution.
- Responding to environmental stewardship goals across multiple systems for an integrated solution

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

Course Schedule

01 SITE / URBAN RESEARCH

WK1 8/24 M First Class Day (after All School Meeting ~2p) / Present Syllabus, Introductions. (F2F:305)
 8/26 W Studio Day
 8/28 F Lecture I: Mapping + Sustainable Cities Lectures: 1) *SDAT + Lubbock*: David Driskill, Urban Tech, Texas Tech; 2) *GIS + Data Mapping*: Lionel Plummer, Instructor, TTU.

WK2 8/31 M Studio Day
 9/02 W Studio Day (F2F:305)
 9/04 F Site Visit (virtual + real) // 1pm: Avenue J and 5th Street, bring camera and sketchbook

WK3 9/07 M *LABOR DAY // No Class*
 9/09 W Studio Day
 9/11 F **DESIGN REVIEW 01: SITE / RESEARCH.** Massing + Mapping (via Zoom + Miro)

02 FORMAL DESIGN STRATEGIES + SCHEME DESIGN

WK4 9/13 M Studio Day
 9/15 W Studio Day (F2F:305)
 9/17 F Lecture II: *Innovative Tall Buildings*: David Malott, Founder and CEO, AI SpaceFactory; 2) *Greening Tall Building*: Jaron Lubin, Design Principle, Safdie Architects

WK5 9/21 M Studio Day
 9/23 W Studio Day (F2F:305)
 9/25 F Studio Day

WK6 9/27 M Studio Day
 9/29 W Studio Day
 10/2 F **DESIGN REVIEW 02: FORM / SCHEME.** Formal + Scheme Design (via Zoom + Miro)

03 TALL BUILDING DESIGN I: STRUCTURE AND PERFORMANCE

WK7 10/5 M Studio Day
 10/7 W Studio Day
 10/9 F Lecture III: Sustainable Tall Building Lectures: 1) *Tall Building and Sustainability*: Luke Leung, Sustainability Director, SOM; 2) *Tall Building Structure*: Aaron Mazeika, Structure Director, SOM

WK8 10/12 M Studio Day
 10/14 W Studio Day (F2F:305)
 10/16 F Studio Day

WK9 10/19 M Studio Day
 10/21 W Studio Day
 10/23 F **DESIGN REVIEW 03: BLDG / DESIGN I.** Structure + Performance (via Zoom + Miro)

04 TALL BUILDING DESIGN II: FACADE AND DESIGN SYNTHESIS

WK10 10/26 M Studio Day
 10/28 W Studio Day
 10/30 F Lecture III: Sustainable Tall Building Lectures: 1) *Tall Building Facade*: Stephen Katz, Technical Director, Gensler; 2) *Tall Building Elevator*: Tim Jacobson, Senior Associate, Gensler

WK11 11/02 M Studio Day
 11/04 W Studio Day (F2F:305)
 11/06 F Studio Day

WK12 11/9 M Studio Day
 11/11 W Studio Day
 11/13 F **DESIGN REVIEW 04: BLDG / DESIGN II.** Facade + Synthesis (via Zoom + Miro)

WK13 11/16 M Studio Day
 11/18 W Studio Day (F2F:305)
 11/20 F Studio Day

WK14 11/23 M Studio Day
 11/25-27 W/F THANKSGIVING HOLIDAY // No Class

WK15 11/30 M Studio Day // 2nd Year Final Design Review (all day)
 12/01 T TTU // 3rd Year Final Design Review (all day)
 12/02 W **FINAL DESIGN REVIEW 05.** Resolution (all day) // **LAST DAY OF CLASS**

WK16 12/10 R Grades Due (noon)

****Dates are subject to change at the discretion of the instructor and/or the College of Architecture.

II. COVID-19 INFORMATION

Face coverings are required. Texas Tech University requires that students wear face coverings while in classes, while otherwise in campus buildings, and when social distancing cannot be maintained outdoors on campus.

Signage. Be attentive to signage posted at external and some classroom doorways that indicates entry and exit ways, gathering and queuing spaces, and availability of masks and hand sanitizer.

Seating assignments. The purpose of assigned seating is to assist in contact tracing, if necessary, and to augment social distancing. Students are expected to sit at a minimum of six feet apart. Seats in your classroom will be designated / marked as available and a required seating chart will be created once everyone is positioned with appropriate social distancing. There will also be an orderly procedure, designed to ensure social distancing, for exiting the classroom. Please refer to the Guidebook distributed at the All School Meeting.

Illness-Based Absence Policy

If at any time during this semester you feel ill, in the interest of your own health and safety as well as the health and safety of your instructors and classmates, you are encouraged not to attend face-to-face class meetings or events. Please review the steps outlined below that you should follow to ensure your absence for illness will be excused. These steps also apply to not participating in synchronous online class meetings if you feel too ill to do so and missing specified assignment due dates in asynchronous online classes because of illness.

1. If you are ill and think the symptoms might be COVID-19-related:

- a. Call Student Health Services at 806.743.2848 or your health care provider. After hours and on weekends contact TTU COVID-19 Helpline at 806.743.2911.
- b. Self-report as soon as possible using the Dean of Students COVID-19 webpage. This website has specific directions about how to upload documentation from a medical provider and what will happen if your illness renders you unable to participate in classes for more than one week.
- c. If your illness is determined to be COVID-19-related, all remaining documentation and communication will be handled through the Office of the Dean of Students, including notification of your instructors of the period of time you may be absent from and may return to classes.
- d. If your illness is determined not to be COVID-19-related, please follow steps 2.a-d below.

2. If you are ill and can attribute your symptoms to something other than COVID-19:

- a. If your illness renders you unable to attend face-to-face classes, participate in synchronous online classes, or miss specified assignment due dates in asynchronous online classes, you are encouraged to visit with either Student Health Services at 806.743.2848 or your health care provider. Note that Student Health Services and your own and other health care providers may arrange virtual visits.
- b. During the health provider visit, request a "return to school" note;
- c. E-mail the instructor a picture of that note;
- d. Return to class by the next class period after the date indicated on your note.

Following the steps outlined above helps to keep your instructors informed about your absences and ensures your absence or missing an assignment due date because of illness will be marked excused. You will still be responsible to complete within a week of returning to class any assignments, quizzes, or exams you miss because of illness.

If you have interacted with individual(s) who have tested positive for COVID-19:

Maintain a list of those persons and consult Student Health Services at 806-743-2911 or your primary care provider on next steps.

Do not return to class until you are medically cleared by your Health Care Provider.

III. UNIVERSITY REQUIRED STATEMENTS.

ADA STATEMENT:

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note: instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact Student Disability Services in West Hall or call 806-742-2405.

ACADEMIC INTEGRITY STATEMENT:

Academic integrity is taking responsibility for one's own class and/or course work, being individually accountable, and demonstrating intellectual honesty and ethical behavior. Academic integrity is a personal choice to abide by the standards of intellectual honesty and responsibility. Because education is a shared effort to achieve learning through the exchange of ideas, students, faculty, and staff have the collective responsibility to build mutual trust and respect. Ethical behavior and independent thought are essential for the highest level of academic achievement, which then must be measured. Academic achievement includes scholarship, teaching, and learning, all of which are shared endeavors. Grades are a device used to quantify the successful accumulation of knowledge through learning. Adhering to the standards of academic integrity ensures grades are earned honestly. Academic integrity is the foundation upon which students, faculty, and staff build their educational and professional careers. [Texas Tech University ("University") Quality Enhancement Plan, Academic Integrity Task Force, 2010]

RELIGIOUS HOLY DAY STATEMENT:

"Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is excused under section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

DISCRIMINATION, HARASSMENT, AND SEXUAL VIOLENCE STATEMENT:

Texas Tech University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from gender and/or sex discrimination of any kind. Sexual assault, discrimination, harassment, and other Title IX violations are not tolerated by the University. Report any incidents to the Office for Student Rights & Resolution, (806)-742-SAFE (7233) or file a report online at tleix.ttu.edu/students. Faculty and staff members at TTU are committed to connecting you to resources on campus. Some of these available resources are: TTU Student Counseling Center, 806- 742-3674, <https://www.depts.ttu.edu/scc/> (Provides confidential support on campus.) TTU 24-hour Crisis Helpline, 806-742-5555, (Assists students who are experiencing a mental health or interpersonal violence crisis. If you call the helpline, you will speak with a mental health counselor.) Voice of Hope Lubbock Rape Crisis Center, 806-763-7273, voiceof-hopelubbock.org (24-hour hotline that provides support for survivors of sexual violence.) The Risk, Intervention, Safety and Education (RISE) Office, 806-742-2110, <https://www.depts.ttu.edu/rise/> (Provides a range of resources and support options focused on prevention education and student wellness.) Texas Tech Police Department, 806-742- 3931, <http://www.depts.ttu.edu/ttupd/> (To report criminal activity that occurs on or near Texas Tech campus.)

CIVILITY IN THE CLASSROOM STATEMENT:

Texas Tech University is a community of faculty, students, and staff that enjoys an expectation of cooperation, professionalism, and civility during the conduct of all forms of university business, including the conduct of student-student and student-faculty interactions in and out of the classroom. Further, the classroom is a setting in which an exchange of ideas and creative thinking should be encouraged and where intellectual growth and development are fostered. Students who disrupt this classroom mission by rude, sarcastic, threatening, abusive or obscene language and/or behavior will be subject to appropriate sanctions according to university policy. Likewise, faculty members are expected to maintain the highest standards of professionalism in all interactions with all constituents of the university (www.depts.ttu.edu/ethics/matadorchallenge/ethicalprinciples.php).

LGBTQIA SUPPORT STATEMENT*:

I identify as an ally to the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA) community, and I am available to listen and support you in an affirming manner. I can assist in connecting you with resources on

campus to address problems you may face pertaining to sexual orientation and/or gender identity that could interfere with your success at Texas Tech. Please note that additional resources are available through the Office of LGBTQIA within the Center for Campus Life, Student Union Building Room 201, www.lgbtqia.ttu.edu, 806.742.5433."

*If you prefer to list campus resources rather than a statement about ally status, you might include the following among other campus resources you wish to share:

Office of LGBTQIA, Student Union Building Room 201, www.lgbtqia.ttu.edu, 806.742.5433

Within the Center for Campus Life, the Office serves the Texas Tech community through facilitation and leadership of programming and advocacy efforts. This work is aimed at strengthening the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA) community and sustaining an inclusive campus that welcomes people of all sexual orientations, gender identities, and gender expressions.