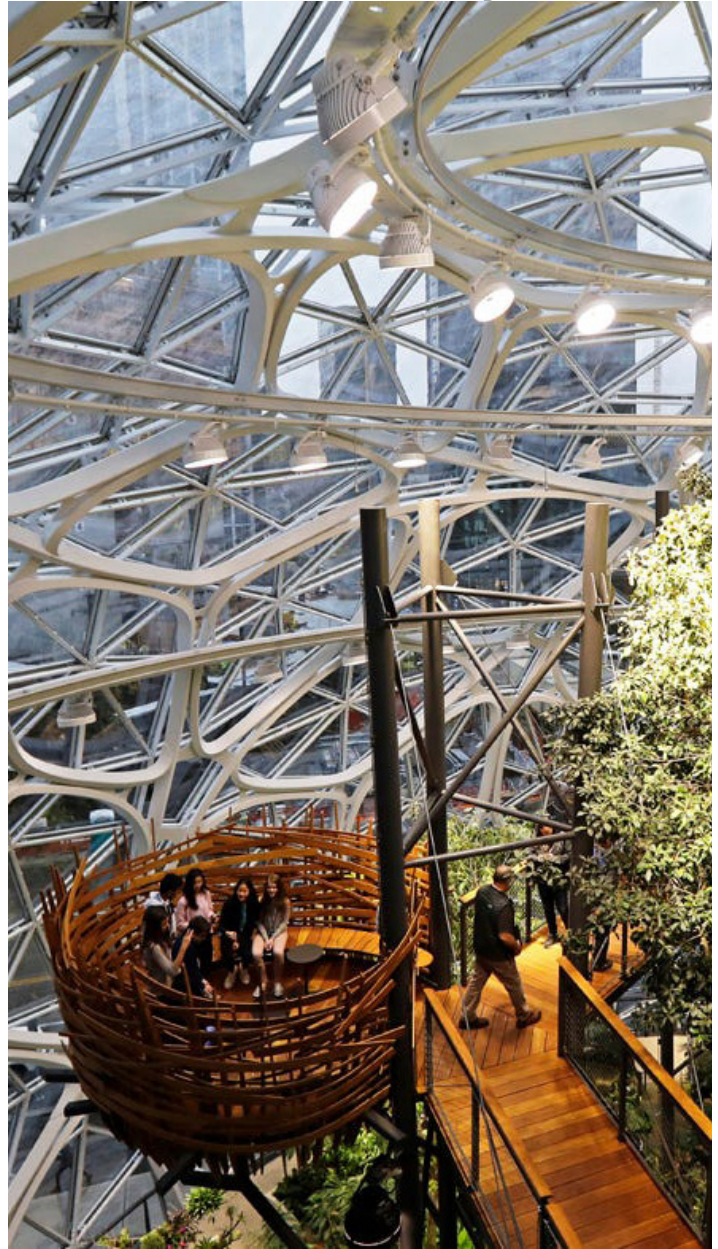


COVID-19 HEADER

Due to the current COVID-19 pandemic, all aspects of this course, lectures, labs, project presentations + examinations, will be completely online. Even in the event that Texas Tech University campus operations are required to change because of health concerns related to the pandemic, this course will remain as a fully online course. Therefore, students will need to have access to a webcam and microphone for remote delivery of the class and interaction with instructors and graduate student assistants throughout the entire semester.



Amazon Spheres, envelope design for office building, Seattle, WA / NBBJ Architects

PETER S. RAAB | ARCHITECT | AIA | LEED AP

ASSOCIATE PROFESSOR

ROOM: 805 [ARCH]

EMAIL : PETER.RAAB@TTU.COM

OFFICE HOURS : BY APPOINTMENT ONLY

GRADUATE / STUDENT ASSISTANTS

Section 501 | Sarah Alexander [Sarah.M.Alexander@ttu.edu]

Section 502 | Sherlyn Hogue [Sherlyn.Hogue@ttu.edu]

Section 503 | Mohammad Karkoutly [Mohammad.Karkoutly@ttu.edu]

Section 504 | Logan A Parker [Logan.A.Parker@ttu.edu]

Section 505 | Haley Sukala [Haley.Sukala@ttu.edu]

Section 506 | Aurea Lopez [Aurea.Lopez@ttu.edu]

TTU CATALOG COURSE DESCRIPTION

current listing: 3350. Architecture Technology III: Gravity: Assemblies. [3]
 Prerequisite: ARCH 2355. Study of structures with emphasis on capacities/ actions/statics and equilibrium. Analysis of structural behavior: material/ assemblies/joints. Introduction to structures codes.

COURSE INFORMATION

ARCH 3350, ARCHITECTURAL TECHNOLOGY III: Gravity: Assemblies
 Section 001 [lecture] + 501, 502, 503, 504 + 505 [lab].
 Credits: 3 semester credit hours lecture + 0 credit hour lab

Meeting Times:

[Section 001] : T + R, 3:30P - 4:50P [lecture] | Online (Zoom + Blackboard).
 [Section 501] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).
 [Section 502] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).
 [Section 503] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).
 [Section 504] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).
 [Section 505] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).
 [Section 506] : M, 5:00P - 6:50P [lab] | Online (Zoom + Blackboard).

STUDENT LEARNING OBJECTIVES

DISCIPLINARY knowledge to be gained is:

- to develop an ability to examine and understand the structural behavior of wood, steel, concrete, masonry and glass.
- to develop an ability to make an informed selection of various structural systems on the basis of material, form, performance, environmental awareness and building assembly processes.
- the ability to analyze key structural precedents as a means to interpret, critique and emulate.
- to cultivate a spirit of inquiry and action to designing construction, material usage and behavior of architectural structures and shells to better inform your future design decisions.

PROFESSIONAL knowledge to be gained is:

- the ability to examine and understand methods of representing architectonic, structural and environmental systems within contemporary architectural practice.
- the ability to apply basic knowledge of statics through schematic calculations through elemental analysis of various structural systems.
- the ability to employ basic building science and quantitative analysis to determine preliminary sizing, spanning, support and material choice.
- the understanding of the elements necessary within the architectural envelope through emulation of existing precedent with an emphasis on the integration and interaction of building tectonics, design and material specification.

CLASS OPERATION + STRUCTURE

Students will engage in educational objectives during both *lecture* and *lab* settings, while accessing your structural knowledge throughout the term during *quizzes*, *homework*, *labwork*, *exams* and *projects*.

Lectures: broken down into three areas for the study, application and integration of architectural constructs:

- Principles** – theoretical basis for structural principles to establish analytical process of structural viability of systems and assemblies.
- Problem Sets** – mathematical calculations and problem solving techniques will be utilized to quantitatively determine of structural members.
- Case Studies** – structural precedents reinforce course material in real terms while establishing a topical understanding of applied technologies.

Labs: offer a more intimate arena to review course content during weekly sessions led by the graduate / student assistants.

Review – of assignments, lectures, and projects to reinforce concepts and offer further explanation.

Homework / Labwork – assignments will be reviewed weekly to discuss to review lecture material.

Sketchbook/Notebook – notes, sketches and structural investigations will be collected/checked bi-weekly during the semester.

Assessment: of structural knowledge will occur during lectures through:

Quizzes / Exams – administered throughout the term to assess your comprehension the lecture, lab and reading materials. Generally consisting of short answer, multiple choice, fill-in-the-blank, true/false and problem sets. Check schedule for exam and quiz dates and topics.

Homework / Labwork – assigned weekly, reviewed during labs, and due at the beginning of class Thursdays.

Projects are a major part of the course and will be where you document and translate meaning through architectural drawing.

P01_ELEMENTS – investigate architectural precedent through research of an innovative envelope design. Reading, scanning, and drawing to understand the precedent's relationship with environment, climate, structure and material culminating in the crafted detailing of the wall section, plan and elevation. *[groups of 2]*.

P02_CONSTRUCT – building on P01, extrapolation of orthographic understanding into three dimensions crafting a large scale axonometric and detail physical models of your precedent building. *[groups of 2]*.

***Each project will have further detailed explanation of specific requirements, due dates, etc. when assigned.

*****No late work will be accepted.**

Logistics

The course is not merely a math class that relates to building but rather a course that uses buildings, technologies, materials, systems and components to convey to students structural design principles and how they shape architecture in fundamental and meaningful ways. The course will be taught by one faculty member [instructor] and administered by a group of graduate / student assistants [G/SA's].

The instructor will lead the weekly lecture component via online using both synchronous (and asynchronous) modalities through Zoom, Blackboard and Miro. The initial 30 minutes of each lecture class will be synchronous and used primarily for project and topic introductions, a question and answer period, and any other general topics that may need to be addressed. The G/SA's will be responsible for hosting synchronous lab sections for smaller groups of students, and manage work submissions, attendance, lab sessions, tutorials, and reviews.

The asynchronous portion of the course be posted as a series of 'micro-lectures' of roughly 10-15 minutes on a specific topic, precedent or problem set. These lectures will be posted to Blackboard as videos and can be viewed/studied either during the scheduled class or afterwards. Students must regularly check blackboard [ttu.blackboard.com] for announcements, assignments, instruction and other vital class information. It is the responsibility of each student to check email multiple times each day.

syllabus

ATTENDANCE POLICY

Attendance is vital to success in this course. Attendance is defined as participation in all class / lab activities including lectures, group and individual discussions, presentations, demonstrations, discussions, and virtual 'in-class' assignments. Participation in virtual 'outside' events is greatly encouraged as it has a great potential to impact your education.

Students are responsible for attending all scheduled class meetings - *both lecture and lab sessions*. Absences in either lecture or lab are treated the same and shall count toward the same allotment of absences. A total of (3) three absences is considered excessive, and will result in the lowering of the final grade by one full letter. *With a total of (4) four absences, you will be dropped from the course and receive an "F"*.

All absences are considered unexcused with the exception of absences due to religious observance and officially approved trips [according to guidelines specified in the TTU Catalog]. Students are expected to comply with TTU Center for Campus Life rules for reporting student illness requiring absence from class for more than one week, or immediate family member deaths.

Attendance will be taken virtually, with the student being marked tardy for being more than five minutes late (ie: logging into the class meeting at 3:36p), and attendance requires students to have their tools, materials, and supplies available for all applicable activities. Any tardiness, leaving early, lack of participation, 'walking' in and out of lectures, undivided attention, disruptive behavior, etc. will count as 1/3 of an absence.

Missing more than 10 minutes of any class period will count as an absence. Students are not permitted to work on assignments from other classes during any of our meetings, and the instructor reserves the right to remove a student from class if s/he is disruptive in any of the above manners. Please be courteous to your classmates, G/SA's and instructor.

MATERIALS + SOFTWARE

Each student is expected to have their own laptop computer, as per the College of Architecture Requirements (https://www.depts.ttu.edu/architecture/coa-resources/incoming/Computer_Requirements.php), which is imperative for being successful in this fully online course. Additional materials will be access to the textbook, a dedicated notebook, a calculator capable of basic trigonometric functions, and a computer with a webcam, microphone and internet capabilities will be required. In addition, the project(s) will require 2D and 3D architectural software (AutoCAD, Rhino, and Adobe Suite) for the successful completion of this course.

Note-taking and class attendance are essential to being successful. Each class day, students are required to arrive on time and bring the necessary resources to take sufficient notes in an organized manner. In conjunction with the lectured material, an abbreviated version of the slides presented will be posted online after the class session. While these "visual notes" will posted on blackboard, it is essential to add additional notes, sketches, diagrams and calculations to allow these examples to better resonate. Sketches, problem examples and notes from verbal demonstrations will be equally important to attain a complete understanding of the material presented in class, as a supplement to the textbook, lab assignments, quizzes and projects.

COURSE STRUCTURE

As stated above, students will engage in various methods of work through the course of the semester. The schedule is broken into four primary phases of instruction, linked through material:

01_LATERAL FORCES + WOOD
02_GLASS + ENVELOPE
03_STEEL
04_CONCRETE

Each phase will consist of topic-related homework, quizzes, and an exam.

GRADING CRITERIA

Performance-based grade evaluations will be made by the instructor and graduate / student assistants according to *Accuracy, Completeness, and Understanding* and based on the estimated coursework weighting below:

EXAMS + QUIZZES

Exam 01	75	} 30%
Exam 02	75	
Exam 03	75	
Exam 04	75	

HOMEWORK, QUIZZES + SKETCHBOOK

Home Work / Lab Work [10 @ 10 pts/ea]	100	} 25%
Quizzes [5 @ 10 pts/ea]	50	
Sketchbook / Notebook	100	

PROJECTS

Project 01	175	} 45%
Project 02	275	

Total points	1,000
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***Estimated coursework above may change during the course.

The grading system is points-based, with each assignment having a possible number of points, with the higher point total resulting from superior work. While the total number above may differ, at the end of the semester, the student's total number of points will be divided by the total number points available and the resultant percentage will be the student's final grade.

Grading will be based on individual performance on each assignment as described above. Grading will follow the criteria of the college 'Grade Definitions' and incremental grade reports will be provided at the conclusion of each phase of the course. Opportunity for extra credit *may* be given throughout the semester, at the instructor's discretion.

GRADING SCALE

Below are the numerical definitions of the grading scale to be used for this course [Incompletes will not be given]:

A +	97 – 100%	
A	94 – 96.99%	
A -	90 – 93.99%	
B +	87 – 89.99%	
B	84 – 86.99%	
B -	80 – 83.99%	
C +	77 – 79.99%	
C	74 – 76.99%	
C -	70 – 73.99%	low pass
D +	67 – 69.99%	
D	64 – 67.99%	
D -	60 – 63.99%	
F	0 – 59.99%	

***See TTU Grade Definitions

[<https://www.depts.ttu.edu/opmanual/OP34.12.pdf>] for more information about grade determinations.

REQUIRED TEXTBOOKS

None.

RECOMMENDED TEXTBOOKS

Structures [7th Edition]

Schodek, Daniel and Martin Bechthold. [New Jersey: Prentice Hall, 2014]. ISBN-13: 978-0132559133

Building Structures [3rd Edition]

Ambrose, James, and Patrick Tripeny. [New Jersey: John Wiley & Sons, 2011]. ISBN-13: 978-0-470-54260-6

Structures By Design: Thinking, Making, Breaking [1st Edition]

Whitehead, Rob. [New York: Routledge, 2020]. ISBN: 978-1138224131

SUPPLEMENTAL RESOURCES

Building Skins [In Detail]

Schittich, Christian. [Birkhauser, Basel, 2006], ISBN-13: 978-3764376406

Constructing Architecture, Materials Processes Structures [2nd Edition]

Deplazes, Andrea. [Birkhauser, Basel, 2008]

ISBN-13: 978-3764386313

Facade Construction Manual

Herzog, Thomas, Roland Krippner, + Werner Lang [Birkhauser, Germany, 2008]. ISBN 3-7643-7109-9

Architectural Graphic Standards [10th Edition]

Ramsey, C. G., and Sleeper, H. R., [New York: John Wiley & Sons, 2000]. ISBN: 978-0-471-70091-3

Fundamentals of Building Construction [3rd Edition]

Allen, Edward. [New York: John Wiley & Sons, 2003]. ISBN-13: 978-0-470-07468-8

The Structural Basis of Architecture [2nd Edition]

Sandaker, Bjorn N., Arne P. Eggen + Mark R. Cruvellier [London + New York: Routledge, 2011]. ISBN: 978-0-415-41547-7

Design-Tech: Building Science for Architects, [2nd Edition]

Alread, Jason, Thomas Leslie and Rob Whitehead. [Routledge, 2014].

ISBN-13: 978-0415817851

The Architectural Detail.

Ford, Edward R. [New York: Princeton Architectural Press, 2011]. ISBN: 978-1-56898-978-5

***The recommend supplemental resources will be put on reserve in the Architecture Library [9th Floor Architecture Building].

NAAB CRITERIA

Realm B: Integrated Building Practices, Technical Skills and Knowledge:

Graduates from NAAB-accredited programs must be able to comprehend the technical aspects of design, systems and materials, and be able to apply that comprehension to architectural solutions. Additionally the impact of such decisions on the environment must be well considered.

Student learning aspirations for this realm include:

- Creating building designs with well-integrated systems.
- Comprehending constructability.
- Integrating the principles of environmental stewardship.
- Conveying technical information accurately

B.4 Technical Documentation:

Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

B.5 Structural Systems:

Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.7 Building Envelope Systems and Assemblies:

Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.8 Building Materials + Assemblies:

Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse

I. 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. [State whether seats in your classroom will be marked as available and unavailable.] 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. [You may want to refer them 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.

II. COLLEGE OF ARCHITECTURE POLICIES / STATEMENTS:**TTU CoA studio culture policy**

[Texas Tech University College of Architecture Studio Culture Policy](#)

TTU CoA shop policy

[Texas Tech University College of Architecture Shop Policy](#)

+++Please keep in mind shop policies on banned materials and rules for shop use.

Shop Procedures / Safety Information:

http://arch.ttu.edu/wiki/Shop_procedures

Retention of Student Work

The college of Architecture reserves the right to retain, exhibit, and reproduce work submitted by students. Work submitted for grade is the property of the college and remains as such until it is returned to the students.

III. MPORTANT UNIVERSITY STATEMENTS:

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 titleix.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, voiceofhopelubbock.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.)

Disabilities:

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, you may contact the Student Disability Services office at 335 West Hall, MS 45007 or 806-742- 2405.

<http://www.depts.ttu.edu/sds/>

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."

+++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.

Academic Regulations:

Consult the Texas Tech University Undergraduate and Graduate Catalog 2016-2017 for information about Dropping a Course, Change of College, Class Attendance, Reporting Illness, Absence Due to Religious Observance, Civility in the Classroom, and Grading Practices.

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.

TTU Official Publications:

[TTU Expectations and Policies](#)

[TTU Academic Catalog - Academic Regulations](#)

[TTU Academic Catalog - Policies, Declarations, Accreditations](#)

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]

Texas Tech University Statement of Academic Integrity:

The College of Architecture takes Academic Integrity and Academic Dishonesty, seriously. Actions by students, which result in academic misconduct, render offenders liable to serious consequences, including academic suspension. [see [TTU, Office of the Conduct](#)]

Part 1: Code of Student Conduct. B. Misconduct, 1. Academic Dishonesty.

"Academic misconduct includes cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, violations of published professional ethics/standards, and any act or attempted act designed to give unfair academic advantage to oneself or another student. Additional information about academic misconduct is available in the Texas Tech University Community Policies section."

[see the [TTU, Office of the Dean of Students, Code of Student Conduct](#)]

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.

schedule

WEEK	DATE	TOPIC	NOTES / ASSIGNMENT	READING
01	25 AUG TH	L00_INTRO + SYLLABUS	// no lab this week	Schodek, ch 1
	27 AUG TH	L01_STATICS RECAP	hw01 assign	
02	01 SEP T	L02_LATERAL FORCE + SEISMIC	lab: discuss/review hw 01 + p01 [M]	Whitehead, ch 3.1
	03 SEP TH	L03_WOOD DESIGN + FRAMING	hw01 due [R] / q01 [R] / hw02 assign	
03	08 SEP T	L04_WOOD CONNECTIONS	// no lab this week (labor day)	Ambrose, ch 4
	10 SEP TH	L05_DIAGRIDS + LAMELLAS	hw02 due [R] / q02 [R] / hw03 assign	
04	15 SEP T	L06_HYBRID SYSTEMS	lab: exam review [M] / hw03 due [T]	
	17 SEP TH	EXAM 01: WOOD + LATERAL FORCES		
05	22 SEP T	L07_PRINCIPLES OF ENVELOPE DESIGN	lab: exam 01 recap [M] / hw04 assign	Herzog, ch. 1
	24 SEP T	L08_ENVELOPE ASSEMBLY + DETAILS		
06	29 SEP T	L09_GLASS + FENESTRATION	lab: p01 wall section pin-up [M]	Alread, Detailing + Curtain Walls
	01 OCT TH	L10_CURTAINS + SKINS	hw04 due / q03 [R]	
07	06 OCT T	L11_SECONDARY SCREENS + SKRIMS	lab: p01 due [M] + p02 assign [T]	Alread, Specifications
	08 OCT TH	L12_MATERIAL SPECIFICATION	hw05 assign	
08	13 OCT T	EXAM 02: GLASS + ENVELOPE	lab: exam 02 review [M] / hw05 due [T]	
	15 OCT TH	L13_PRINCIPLES OF STEEL DESIGN	hw06 assign	
09	20 OCT T	L14_STEEL COLUMN DESIGN	lab: p02 mid-review [M]	Ambrose, ch. 5.1 - 5.2
	22 OCT TH	L15_STEEL SPANNING SYSTEMS	hw06 due / hw07 assign	
10	27 OCT T	L16_STEEL CONNECTIONS	lab: review steel columns + spans [M]	Ambrose, ch. 5.3 - 5.4
	29 OCT TH	L17_STEEL DESIGN / CASE STUDY	hw07 due / hw08 assign / q05 [R]	
11	03 NOV T	EXAM 03: STEEL	lab: exam 03 review [M] / hw08 due [T]	
	05 NOV TH	L18_CONCRETE PROPERTIES	hw09 assign [R]	
12	10 NOV T	L19_CONCRETE BEAM DESIGN	lab: p02 mid-review due [M]	Ambrose, ch. 6
	12 NOV TH	L20_CONCRETE CONNECTIONS	hw09 due [R] / q06 / assign hw 10	
13	17 NOV T	L21_CONCRETE FOUNDATIONS	lab: exam 04 review [M] / hw10 due [T]	
	19 NOV TH	EXAM 04: CONCRETE		
14	24 NOV T	L22_DESIGN INTEGRATION	lab: p02 mid-review redline Q & A [M]	
	26 NOV TH	THANKSGIVING BREAK	// no class	
15	01 DEC T	NO CLASS / 3rd year final reviews	// no lab this week	
	03 DEC TH	NO CLASS / TTU fall semester officially ends on Wednesday, December 2.		
16	08 DEC T	FINAL EXAM DATE	p02 FINAL PRESENTATIONS [4:30 - 7:00p] // via Zoom // coincides with ttu final exam period	
17	14 DEC M	FINAL GRADES DUE	// via Raiderlink by 5pm (graduating seniors due 10 DEC, noon)	