

## **ARCH 5501 TOPICAL STUDIO**

College of Architecture, Texas Tech University  
Spring 2021

Brendan Sullivan Shea - bshea@ttu.edu

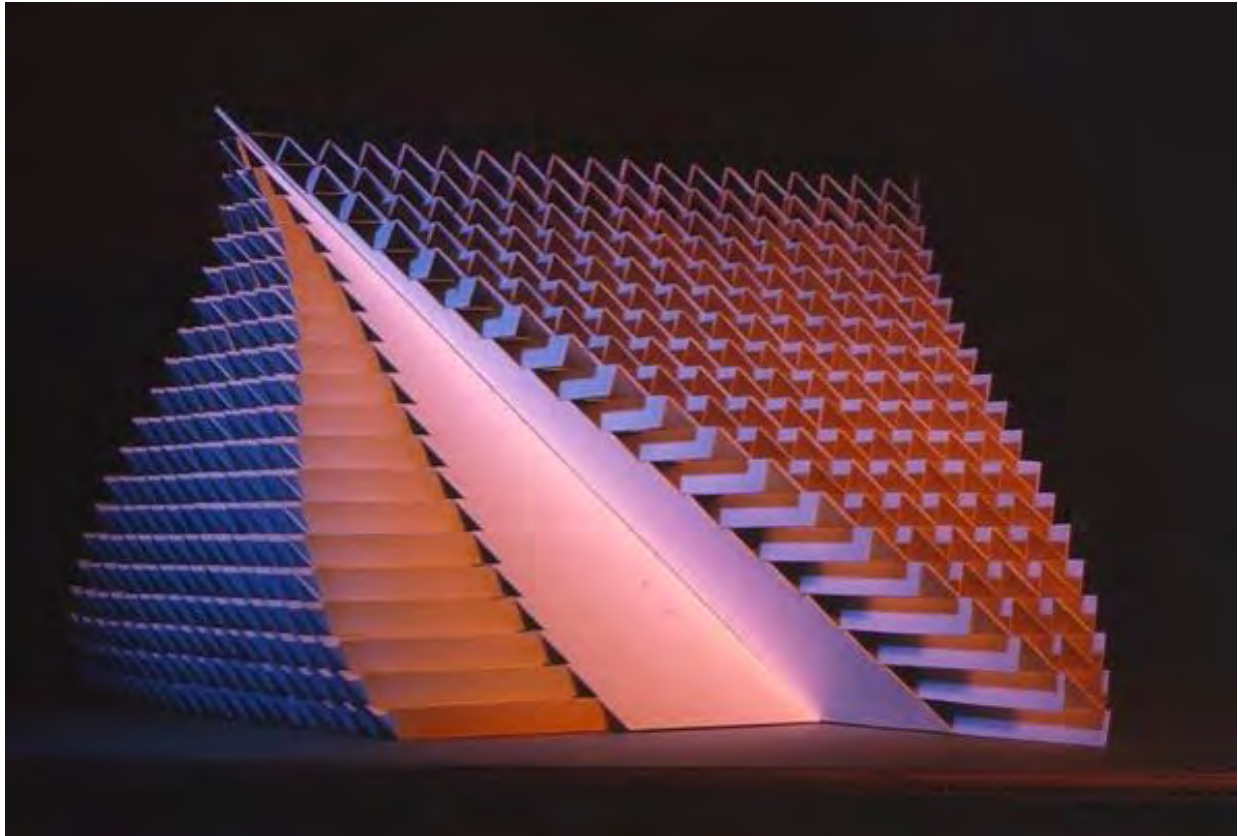


Fig 01 — Ralph Knowles & The Natural Forces Laboratory, Tetrahedron Model, 1963.

### **WILD INTERFACES**

Toward An Architectural Interface  
For The Wildland-Urban Interface

#### **Catalog Description**

Focuses on how architectural concepts and ideations translate into built environments that affect the public realm.

## Course Description/Studio Brief:

Between 1990 and 2010, the fastest growing land-use type in the United States was the wildland-urban interface, or WUI. The WUI has been defined by the US Forest Service qualitatively as, “a place where humans and their development meet or intermix with wildland.”<sup>1</sup> In addition to its rapid expanse, the space of the wildland-urban interface—a vast, distributed, liminal condition—is also one of the most catastrophe-prone land-use types in the United States, posing both significant challenges and many opportunities for architectural thought and practice. In addition to the complexities of these sites (fires, floods, landslides, etc), the environmental crisis occurring on a planetary scale underscores the imperative for architects to act, to develop new architectural strategies which address the schisms and polarities in the binary notions of city/wilderness, building/landscape, and human/nature. What is wilderness? Who does it serve? Who might it exclude? Is access to nature evenly distributed? And, how might architects address environmental justice across multiple scales? This course explores the changing relationship between environment and architecture in this zone, and seeks to derive from this research a new field of architectural effects relevant to rethinking notions of natural and post-natural, wild and rewilding, and conservation and co-evolution. In the endeavor of interrogating the space of the interface, this course tasks students with the challenge of developing new models of architectural practice that are “both formally and programmatically sophisticated and environmentally responsible.”<sup>2</sup>

Simultaneously, this studio will explore a secondary understanding of “interface” by examining an alternative definition; the graphic-user interface—or the array of interactive virtual toggles, buttons, switches and screens which increasingly populate our current mediascape. Bringing together ideas and technologies, this exploration will entail learning how to draw with code, focusing in particular on how the wild, feral, or fuzzy protocols of post-digital contemporary architectural production effect change, not only in architecture’s representational media, but the broader agency of drawing to inspire architectural imagination of new cultural, economic, or socio-political agendas.

In order to activate our studies in the panhandle of Texas and extend our architectural inquiry across the Southwest, the studio will take on the challenge of looking across the West: studying the site plans of the National Wildlife Refuge System, National Parks System, and National Forests—considered as precedent examples of engagement through conservation, preservation, and the management of “multiple use” of public lands—and taking an architectural inventory of the 1938 US Forest Service book “Acceptable Plans : Forest Service Administrative Buildings” as source of formal, tectonic, and programmatic fodder in order to inspire and execute our own work.<sup>3</sup> Working early on with maps, codes and scripts to survey, analyze, and transform “the wilderness”, ultimately, students in the studio will progress through drawing, modelling, and narrative exercises, concluding with design ideas tested and developed in speculative formats at two scales: a Visitor’s Center & National Park in Lubbock, Texas, Las Cruces, New Mexico, Lake Havasu, Arizona or Las Vegas, Nevada.

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<sup>1</sup> Stein, Susan M.; Comas, Sara J.; Menakis, James P.; Steward, Susan I.; Cleveland, Helene; Bramwell, Lincoln; Radeloff, Volker. “Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface” USDA Forest Service. USDA. Retrieved 8 May 2018.

<sup>2</sup> Sanders, Joel, “Human/Nature: Wilderness and the Landscape/Architecture Divide,” 2011.

<sup>3</sup> Forest Service, USDA. Acceptable Plans Forest Service Administrative Buildings. 1938. TTU 5501 / Spring 2021 / Syllabus

### **Teaching Methods/Studio Methods:**

The studio is conceived as a single semester-long project structured into two interrelated phases, or concentrations. In the first concentration, **Survey: An Inventory of Novel Interfaces**, students will collectively catalog wild interfaces in art, architecture, and geography and reconsider the interface between the built environment and wildland. While studying the interplay of form and site at work in the National Forest System, National Park System, and National Wildlife Refuges, students will generate an inventory architectural precedents, and their own transformed form and site reinterpretations in animations, dense linework and tone indicative of analysis and transformation. Working in groups in the second concentration, **Station: A Center For Wildland-Use Interpretation**, students will consider how an Entrance Booth, Ranger Station, Visitor's Center, and National Park might jointly act as a recreational site and interpretive hub in one of four sites across the Southwest, detailing their proposal in site plans, floor plans, sections, perspectives and axonometrics.

### **Student Learning Objectives**

#### Disciplinary

Use of Precedent: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

Engagement: Ability to engage broad community issues and concerns that encompass or suggest dynamic political, social, cultural and/or environmental solutions.

Program: Ability to critically consider unique and complex programmatic elements within comprehensive building design.

Context: Understanding of the civic awareness of the architect's responsibility beyond the immediate client.

Scale: Ability to develop a range of approaches that vary in scale.

#### Professional

Architectural Design Skills: Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design. Ability to translate architectural ideations into a complete building that has a clear structural order, architectonic identity, materiality, mechanical and environmental systems, circulation, envelope and detailing.

Representational Skills: Ability to use analytical and representational drawings to describe and record the phenomenal, physiological and psychological aspects of site in order to respond holistically to an existing community context. Draw clear site plans, floor plans, site/building sections, and understand connections between elevations, wall sections and detailing of the architectural envelope in relation to the context.

Site Design: Ability to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

## Required Texts / Lectures

Relevant readings will be assigned throughout the semester to provide important insight, historical background, and theoretical frameworks for topics addressed this semester. Studio reading discussions will occur as stipulated in the Course Schedule. Readings will be listed on assignment handouts and will be posted to Course Website.

### Interface: City, Space, and Wildlands

1. Hendrix, Howard. "WUI Space: The Language Of Exurbia," *Boom: A Journal of California*, Vol. 2, No. 4, 2012.
2. Hester, Blazej and Moore. "Whose Wild? Resolving Cultural and Biological Diversity Conflicts in Urban Wilderness," *Landscape Journal*, Vol. 18, No. 2, 1999.
3. Allen, Stan. "Infrastructural Urbanism," *Points+Lines: Diagrams and Projects for the City*. Princeton Architectural Press, New York, 199.
4. Witt, Andrew. *The Natural Forces Laboratory: Ralph Knowles and the Instrumentalized Studio*, CCA , 2018.
5. Galloway, Alexander. *The Interface Effect*. Polity, Cambridge. 2012.

### Intermix: Old Plans, New Plans, and Mixed Plans

1. Clark, Roger. *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis*. 2012.
2. Rowe, Colin. *The Mathematics Of The Ideal Villa And Other Essays*. Cambridge, MIT, 2009.
3. Tschumi, Bernard. *Architecture and Disjunction*. "Cross- Dis- Trans- Programming". Cambridge, MIT, 1994.
4. Lavin, Sylvia. "Toward an Even Newer Architecture," *Log*, No. 4, 2005.

### Sheds: Big, Ugly, and En-formal

1. Venturi, Scott Brown, Izenour. "Ugly and Ordinary Architecture, or the Decorated Shed," *Learning from Las Vegas*. MIT, Cambridge, 1977.
2. Banham, Reyner. "Big Shed Syndrome," *New Society*. December 1972.
3. Jencks, Charles. "The L.A. Style is Forged: En-Formality," *Heteropolis*. Berlin, Erns, 1993.

### Spurs: Site Lines, Sight Lines, and Similar Stories

1. Bierig, Alexander. "The High Line And Other Myths," *Log*, No. 18, 2010.
2. Ulam, Alex. "Taking The High Road," *Landscape Architecture*, No. 12, 2004.
3. Pope, Albert. "Urban Implosion," *Ladders*, Princeton Architectural Press, New York, 1996.
4. Demonchaux, Nicholas. *Local Code: 3,659 Proposals About Data, Design & the Nature of Cities*. Princeton Architectural Press, New York, 2016.
5. Mario Gandelsonas. "The Order of the American City," *Assemblage* No. 3. 1987.

## **Course Requirements**

Research: Precedent studies will be paired with studio assignments and projects throughout the semester. Each student is expected to use the library on a regular basis to investigate ideas and projects relevant to course content.

Required Software: Processing; Powerpoint or Keynote; Adobe CC including Photoshop, Illustrator, InDesign, After Effects; Rhinoceros 6 or 7; Grasshopper 3D; Agisoft Photoscan or Trnio. No prior knowledge of software is required, nor are there prerequisites for the course, only an interest in mapping various media in unconventional ways. Students will be advised in three interrelated exercises, each of which will benefit from leveraging aspects of existing parametric and computational platforms.

Portfolio: Each student will be required to submit a digital portfolio at the end of the semester. The content should be thoughtfully presented on a single flash drive (USB) with a single file; a PDF with 8 1/2" x 11" maximum-size portfolio. Since all assignments must be included in the portfolio, regular documentation throughout the semester is highly recommended. Portfolio guidelines will be distributed.

## **Attendance Policy**

Attending classes is a basic responsibility of every TTU student who is enrolled in courses at the College of Architecture. In studio courses, the central learning experience is through direct contact between the student and the faculty which advances a student's understanding through shared exploration. Regular and punctual class attendance is considered an essential part of satisfying both the NAAB and LAAB requirements.

Studio meets every Monday, Wednesday, and Friday. Students are required to attend and participate in each class period. It is crucial that students remain engaged throughout each class period. The College of Architecture's attendance policy is the following: Students are allowed to miss the equivalent of one week of class (three classes if the course meets three times/week, etc) without directly affecting the student's grade and ability to complete the course. If additional absences are required for a personal illness/ family emergency, pre-approved academic reason/religious observance, the situation should be discussed and evaluated with the faculty member and appropriate Chair on a case-by-case basis. For each absence over that allowed number, the student's evaluation can be lowered up to one full letter grade, though the greater than four absences are grounds for failure at the discretion of the program.

Any student not in class within the first 10 minutes will be considered tardy, and any student absent (in any form including sleep, technological distraction, or leaving mid class for a long break) for more than 1/3 of the class time can be considered fully absent. If arriving late, a student must be respectful of a class in session and do everything possible to minimize disruption caused by a late arrival. It is always the student's responsibility to seek means (if possible) to make up work missed due to absences, not the instructor's, although such recourse is not always an option due to the nature of the material covered.

A mid-term or final review is to be treated the same as a final exam as outlined and expected by the University. Students must understand that days allocated for their studio final in the syllabus are considered an examination period. If they are absent or tardy on any review day and miss their opportunity to present, this is considered equal to missing a final exam.

### **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.
- b) Self-report as soon as possible using the [ttucovid19.ttu.edu](https://ttucovid19.ttu.edu) management system. 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, remaining documentation and communication will be handled through the Office of the Dean of Students, including notification to your instructors.
- 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.

## Grading

Grades are defined as follows:

### **A - Superior/Excellent (90-100%)**

Accurate and complete work that exceeds the level and requirements requested by the instructor. Consistently showing scholarly initiative, innovation, attempts, discrimination and discernment.

### **B - Above Average (80-89%)**

Accurate and complete work meeting the requirements of the instructor, and exceeding the level requested in a few. Often showing scholarly initiative, innovation, attempts, discrimination and discernment.

### **C - Average (70-79%)**

Accurate and complete work meeting the requirements of the instructor and requiring minimal corrections. Work is satisfactory but needs improvement. Inconsistently showing scholarly initiative, innovation, attempts, discrimination and discernment.

### **D - Unsatisfactory (60-69%)**

Work that is often inaccurate or incomplete, not meeting the minimum requirements of the instructor. Rarely showing scholarly initiative, innovation, attempts, discrimination and discernment.

### **F - Unacceptable (0-59%)**

Work that is unacceptable therefore, not defined.

### **Breakdown & Weights:**

Progress, Preparation, Participation 25%

Concentration One 25%

Concentration Two 25%

Final Presentation 15%

Portfolio Submission 10%

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Total : 100%

Assignments that do not reflect adequate progress or completion will not be discussed during desk crits, pinups and reviews; insufficient preparation by students will be recorded as a ½ absence.

### **Means of Progress, Preparation, Participation Evaluation:**

Attendance

Completion of deliverables in a timely manner

Capacity to integrate and respond to instructor's feedback

Demonstrating an understanding of the program and key concepts of the class

Please refer to TTU OP. 34.12 for further information on grading.

<https://www.depts.ttu.edu/opmanual/OP34.12.pdf>

**Tentative Course Schedule**

These dates are subject to change at the discretion of the instructor and/or the College of Architecture.

<b>Week 1</b>	January 20	Studio Presentation
	January 22	Studio Introduction Concentration One Introduction
<b>Week 2</b>	January 25	Desk crit / Pin -Up
	January 27	Desk crit / Pin -Up
	January 29	Desk crit / Pin -Up
<b>Week 3</b>	February 1	Desk crit / Pin -Up
	February 3	Desk crit / Pin -Up
	February 5	Desk crit / Pin -Up
<b>Week 4</b>	February 8	<b>Group Crit 1</b>
	February 10	Desk crit / Pin -Up
	February 12	Desk crit / Pin -Up
<b>Week 5</b>	February 15	Desk crit / Pin -Up
	February 17	Desk crit / Pin -Up
	February 19	Desk crit / Pin -Up
<b>Week6</b>	February 22	<b>Group Crit 2</b>
	February 24	Desk crit / Pin -Up
	February 26	No Class - University
<b>Week 7</b>	March 1	Desk crit / Pin -Up
	March 3	Desk crit / Pin -Up
	March 5	Desk crit / Pin -Up
<b>Week 8</b>	March 8	Desk crit / Pin -Up
	March 10	Desk crit / Pin -Up
	March 12	<b>Concentration One Final Review</b> * Midterm



<b>Week 9</b>	March 15	Concentration Two Introduction
	March 17	Desk crit / Pin -Up * Mid Semester Grades Due
	March 19	No Class - Spring Vacation
<b>Week 10</b>	March 22	Desk crit / Pin -Up
	March 24	Desk crit / Pin -Up
	March 26	Desk crit / Pin -Up
<b>Week 11</b>	March 29	<b>Group Crit 3</b>
	March 31	Desk crit / Pin -Up
	April 2	Desk crit / Pin -Up
<b>Week 12</b>	April 5	No Class - University
	April 7	Desk crit / Pin -Up
	April 9	Desk crit / Pin -Up
<b>Week 13</b>	April 12	Desk crit / Pin -Up
	April 14	Desk crit / Pin -Up
	April 16	Desk crit / Pin -Up
<b>Week 14</b>	April 19	<b>Group Crit 4</b>
	April 21	Desk crit / Pin -Up
	April 23	Desk crit / Pin -Up
<b>Week 15</b>	April 26	Final Review Mock -Up
	April 28	Desk crit / Pin -Up
	April 30	Pencils Down
<b>Week 16</b>	May 3	Pre-Review
	May 4	<b>Concentration Two Final Review</b>

### **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 [titleix.ttu.edu/students](http://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](http://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/ttspd/> (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](http://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](http://www.lgbtqia.ttu.edu), 806.742.5433.” Office of LGBTQIA, Student Union Building Room 201, [www.lgbtqia.ttu.edu](http://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.

### **NETIQUETTE**

Netiquette refers to etiquette on computer networks. Students are expected to treat the online class community as a safe, engaging, and professional space Netiquette expectations are as follows:

- Use course content to support responses
- Strive for clarity
- Exercise professionalism on camera and in all assignments
- Think and reflect before responding
- Stay on point
- Avoid shorthand (e.g., IDK)
- Avoid sarcasm
- Avoid yelling (e.g., ALL CAPS!!!)
- Strive for quality over quantity

## **BEST PRACTICES**

Since the class will meet on Zoom, please follow this protocol to maximize your ability to concentrate and participate with minimal distractions:

- Participate in class with web camera on, if possible
- Clear background of any visual distractions (or use designated virtual backgrounds, as requested)
- Keep microphone on mute unless speaking
- Use a headset to limit outside noises
- Alert others in their household not to disturb
- Follow established class norms for contributing to class discussion (e.g., raising hand; using chat; unmuting / muting when called upon; collaborating with small groups; presenting original work)