

# ENVIRONMENTAL ANALYSIS & SITE PLANNING

## UNIVERSITY OPERATIONS NOTICE

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. For course studios, we will use multiple platforms, including Blackboard, Microsoft Teams, Zoom, Miro, and OneDrive.

## PRINCIPLES STATEMENT

Our operations continue to adapt to support the responses of Texas Tech University and to operate within a global pandemic.

1. Together we will move forward with steady and calm responses.
2. The humane option is the best option. We are going to prioritize supporting each other as humans, solutions that make sense for the most, and sharing resources and communicating clearly.
3. We cannot do the same things as before online. We will develop new patterns collectively for our work.
4. We will foster intellectual nourishment, social connection, and personal accommodation with accessible asynchronous content for diverse access, time zones, and contexts, coupled with synchronous discussion to learn together and overcome isolation.
5. We will remain agile and adjust to the ongoing situation. Everyone needs support and understanding in this unprecedented evolution.

Principles statement above reprinted with permission from the Land Arts 2020 Adaptation syllabus, originally inspired by Brandon L. Bayne, Associate Professor of Religious Studies at University of North Carolina, Chapel Hill published in "Interrupted Semester" by Beckie Supiano in the *The Chronicle of Higher Education*, 20 March 2020.

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**ARCH 3373 Environmental Analysis & Site Planning**  
**College of Architecture, Texas Tech University**  
**Fall 2020, Online Modality**

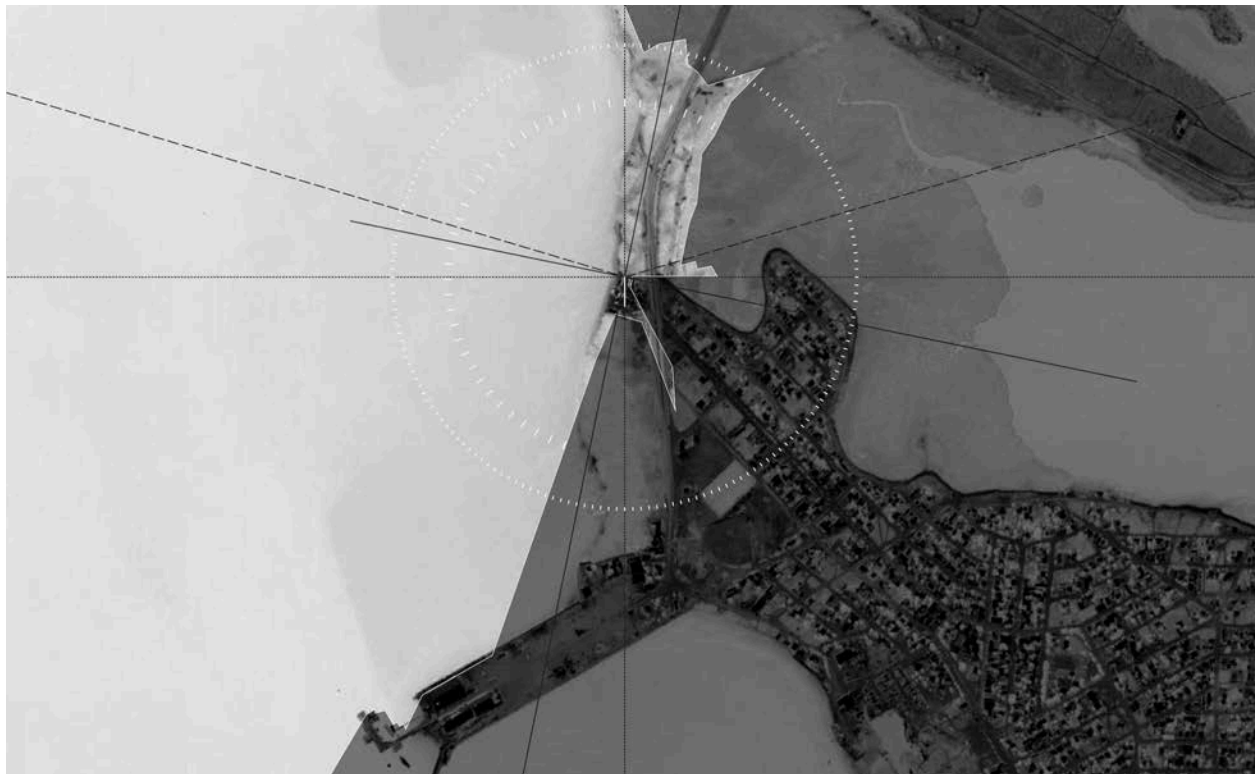
**Instructors:**

Victoria McReynolds, Assistant Professor, [v.mcreynolds@ttu.edu](mailto:v.mcreynolds@ttu.edu), Office Rm 405,  
Hours 2-3pm Tuesdays & by appointment

**Student Assistants:**

Narsis Holmes, [narsis.R.Holmes@ttu.edu](mailto:narsis.R.Holmes@ttu.edu), Hours tbd

Andres Armendariz, [andres.Armendariz@ttu.edu](mailto:andres.Armendariz@ttu.edu), Hours tbd



**ENVIRONMENTAL ANALYSIS AND SITE PLANNING**  
**Situating Architecture in a Changing Field**

**Catalog Description:** Arch 3373-091. Online. Environmental Analysis and Site Planning (3:3:1). Basic course to develop a working knowledge of the techniques and principles involved in site planning to provide optimum living and working environments.

**Course Description**

This lecture course explores site and the greater environment as an ongoing system of relationships with architecture. Introduced themes and examples challenge the traditional notion of a site as a place from which building sits. Rather these course topics introduce site as a dynamic field defined by an ecology of changing factors. Architecture therefore is a construction of ideas situated within a changing context. With a focus towards the most vulnerable sites and environments, we will analyze terms and definitions, consider concepts and conditions, explore

methods and case studies, and become familiar with industry standards and tools for designing site.

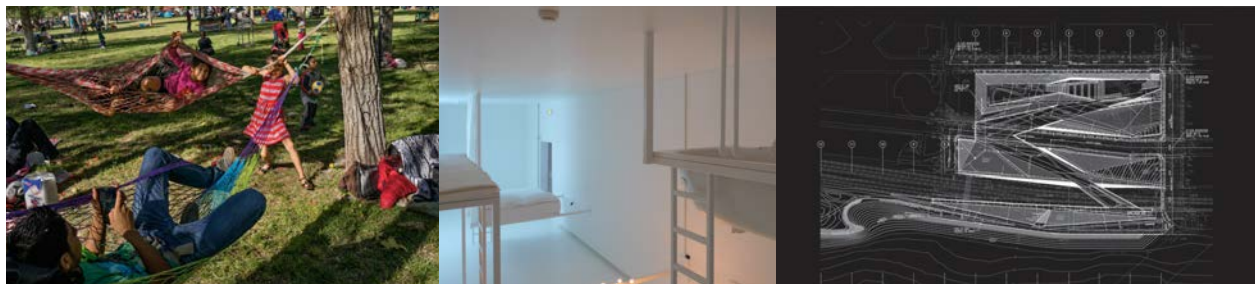
Environmental and sustainable strategies are no longer an exception to the design culture. Rather solutions to the increasingly complex site changes are approached with an integrative solution that takes into account immediate change and the long term vision. Our observations, understandings and implementations of sustainable environmental approaches is now considered an essential component of design. We live in an increasingly unpredictable world of constantly changing, unstable environmental effects. Therefore our design solutions need to equally take into consideration a flexible and innovative strategy that accommodates for the for coming extremes.

Environmental considerations range from the single residential project site to larger infrastructure strategies. This course teaches tactile practical lessons to understand the consequences of solar, water, temperature challenges at all project scales. And approaches the understanding of environmental systems through the critical urgent challenges facing contemporary design and construction.

In this course we will cover the sensibilities of environmental analysis and site planning practice.

### **General Themes**

- Environment, Natural Systems and the vulnerability of Sites
- Terrestrial Impacts: Topography Analysis, Erosion & effects, Soil Conditions
- Cultural Conditions and Consequences: Monuments, histories, language, power structures
- Atmospheric Tracking and representation: Wind Analysis, passive solar response, Sun and Light Analysis, natural and electric light, passive solar response
- Hydrological Management: Precipitation, Water Analysis, integration and mitigation strategies



### **Student Learning Objectives**

- A working knowledge of the definitions of environment, site, and landscape.
- An international case studies of best practice
- The ability to identify various site factors pertaining to a design project
- The ability to define atmospheric, hydrological, terrestrial, and cultural site conditions
- A introductory knowledge of creative problem solving for site constraints and variables

## Student Performance Objectives

- A working method for developing site strategies and designs
- Techniques for regrading terrain
- Techniques for siting a building according to solar and wind performance concerns.

## Means of Evaluation:

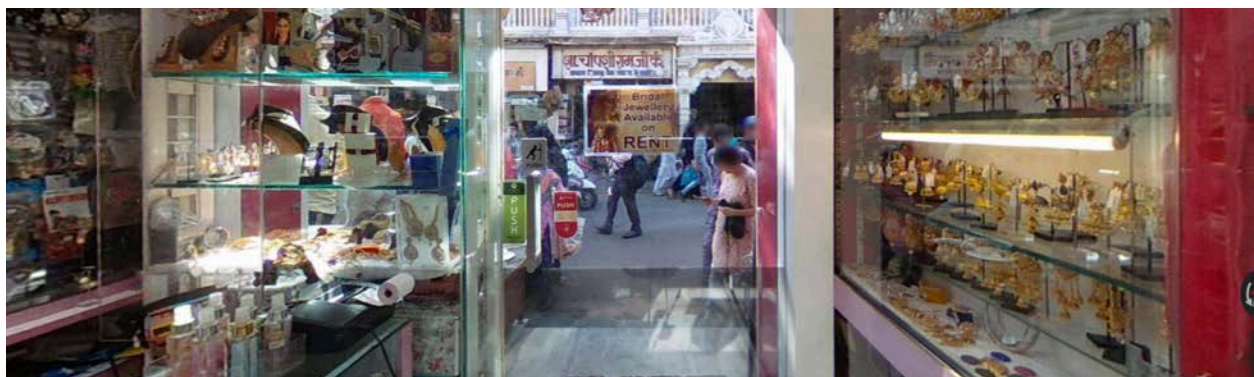
### 1. Deliverables -

- Wk 1 weekly notes postings
- Wk 2 quiz 01 (teams), weekly notes postings
- Wk 3 weekly notes postings
- Wk 4 CS 01 (pdf), weekly notes postings
- Wk 5 HW 01 (pdf), weekly notes postings
- Wk 6 weekly notes postings
- Wk 7 CS 02 (pdf), *weekly notes postings*
- Wk 8 quiz 02 (teams), weekly notes postings
- Wk 9 weekly notes postings
- Wk 10 CS 03 (pdf), weekly notes postings
- Wk 11 HW 02 (pdf), weekly notes postings
- Wk 12 weekly notes postings
- Wk 13 weekly notes postings
- Wk 14 CS 04 progress (pdf), weekly notes postings
- Wk 15 CS 04 (pdf), Final Content Due

2. Methods of Assessment: Completion of all deliverables in a timely manner, engagement in course discussion with topically relevant contribution, presentation quality and clarity of schematic design intention, class quiz on reading and lecture content, course attendance, and submitted notes summarizing lecture and readings comprehension and questions.

## Teaching Methods:

- Lectures on course themes and site techniques
- Utilization of teamwork, analyze case study challenge, identify key factors and propose schematic design solution
- Invited lectures by specialists working with similarly presented topics
- Review of Contemporary Conditions, short topics on current events that shape site, architecture and design



## Course Schedule

- Wk 1 / Environment & Site, Intro  
T, course logistics and themes  
TH
- Wk 2 / Cultural  
T, quiz 01  
TH, Introduce Case Study 01
- Wk 3 / Cultural  
T  
TH, guest speaker
- Wk 4 / Cultural  
T  
TH, Due Case Study 01, guest speaker
- Wk 5 / Terrestrial  
T, Due Homework 01  
TH, Introduce Case Study 02
- Wk 6 / Terrestrial  
T  
TH
- Wk 7 / Terrestrial, *progress grade 1 issued*  
T  
TH, Due Case Study 02
- Wk 8 / Atmospheric  
T, quiz 02  
TH, Introduce Case Study 03
- Wk 9 / Atmospheric  
T  
TH, Issue Homework 02
- Wk 10 / Atmospheric  
T  
TH, Due Case Study 03
- Wk 11 / Hydrological  
T  
TH, Due Homework 02, Introduce Final Case Study
- Wk 12 / Hydrological, *progress grade 2 issued*  
T, guest speaker  
TH, In-class Group Working Session
- Wk 13 / Hydrological  
T  
TH, In-class Group Working Session
- Wk 14 / Hydrological  
T, Due Final Case Study Progress  
TH *Thanksgiving holiday*
- Wk 15  
S Final Reviews, Digital Presentation, Digital Archive of submitted work

\*For additional description see course schedule on Microsoft teams channel. These dates are subject to change at the discretion of the instructor and/or the College of Architecture.

## Required Texts

Site Planning: International Practice, by Gary Hack, available digitally

Site Planning Volume 1:

<https://ebookcentral.proquest.com/lib/ttu/detail.action?docID=6246631>

- Includes: Part 1 The Art of Site Planning, Part 2 Understanding Sites, Part 3 Planning Site

Site Planning Volume 2:

<https://ebookcentral.proquest.com/lib/ttu/detail.action?docID=6246576>

- Includes: Part 4: Site Infrastructure

Site planning Volume 3:

<https://ebookcentral.proquest.com/lib/ttu/detail.action?docID=6246537>

- Includes: Part 5 – Site Prototypes

Additional Course Readings, provided digitally

## Reference Texts (on reserve in the Architecture Library)

Introduction. What is Landscape?, by John R. Stilgoe

Ecology without Nature, by Timothy Morton

Sun, Wind, & Light: Architectural Design Strategies

The Rambunctious Garden: Saving Nature in a Post-Wild World, by Emma Marris

## Course Requirements

**Design notebook** to document evolving course lecture points, thoughts and progress (sketches, drawings, notes, writings, etc.) is required for each student. The notebook is crucial to reflective thinking and a vital record of key ideas and explorations embodied within final projects. The notebook must be available in class everyday.

**Personal laptop computer** used for course meetings, and work is required for each student. See the [college website](#) for minimum specifications. Technical difficulties, viruses, crashes, server and print bureau problems, or corrupted files will not be accepted as excuses for not producing assigned work. Back up all digital work regularly.

**Software** such as current Adobe Creative Cloud and three dimensional modeling tools are required and available from [eRaider.ttu.edu](http://eRaider.ttu.edu), Texas Technology Store or Creative Engine. Rhino, AutoCAD. Such software might be used to determine measurements, draft known conditions, test schematic ideas for case studies.

**Drawing tools** required for biweekly use per course schedule, at a minimum, include: architects scale or engineering scale; metal straight edge; roll of white or yellow trace paper; pencils; lead pointer and sharpener; water based colored pens and markers..

## Grading

Evaluation of student performance is based upon the innovative case study proposals, clarity of graphic communication, resolution of final products submitted in accordance with the course schedule, final presentation at end of the semester final. Evaluation are considered on a 0-100 scale.



All work must be completed on time. Expect substantial grade reductions for late or incomplete work.

Weekly notes are evaluated as posting contributions to the Microsoft Team course channels. Postings are statements inclusive of original material that add to the conversation. Postings that include links, and references to outside content should include an original summary statement that identifies the relevancy of the information. Postings count towards weekly notes when they appear in the "Dialogue, Answer, Questions", "Reference, News, Links", or "General" channel. A minimum of three posts are to be made weekly.

Grading will be based on individual and group performance, quizzes, and the products produced over the course of the term. Everything relative to the course production is part of the process. Grading will follow the criteria of the college [Grade Definitions](#) and evaluations will be provided as outlined in the schedule. Attendance is vital to success in this course (be sure to review the Attendance Policy listed above).

Extra credit may be available in this course for participation according to instructor determined lecture series and identified events outside class .

#### **Semester grade distribution:**

%	<i>product</i>
20	Participation, Attendance, Weekly notes
10	In-class Quiz (x2)
30	Homework (x2)
30	Case Studies (x3), <i>completed in group</i>
10	Final Project & Presentation, <i>completed in group</i>

*100% All Course Products*

Grades are defined as follows ([http://arch.ttu.edu/Grade\\_Definitions/](http://arch.ttu.edu/Grade_Definitions/)):

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 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.

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

NAAB Criteria Met

**Realm B: Building Practiced, 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. In addition, the impact of such decisions on the environment must be well considered.

#### B.1. Pre-Design:

*Ability* to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

B.2. Site Design: *Ability* to respond to site characteristics, including urban context and developmental patterning, historic fabric, soil, topography, ecology, climate, and building orientation in the development of a project design.

B.3. Codes and Regulations: *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

**Realm D: Professional Practice.** Graduates from NAAB-accredited programs must understand business principles for the practice of architecture, including management, advocacy, and the need to act legally, ethically, and critically for the good of the client, society and the public.

D.4. Legal Responsibilities: *Understanding* of the architect's responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.

#### Attendance Policy

Each student is allowed three unexcused absence. Each additional absence will cause a 2 point reduction from the final grade. All absences are considered unexcused except for absences due to religious observance, officially approved field trips, or per the illness-based absence policy below. Students are expected to comply with rules for reporting student illness requiring absence from class for more than one week. See University [Academic Regulations](https://catalog.ttu.edu/index.php) <<https://catalog.ttu.edu/index.php>>

Attendance is defined as full participation in all course activities, including lectures, presentations, in class work sessions, demonstrations, and discussions. Attendance requires students to have the necessary computer and supplies available for all actives (i.e.: computer, drawing materials, notebook). Tardiness (as described above), leaving early, lack of participation, undivided attention, gaming, goofing around, and disruptive behavior will be recorded as an absence. Working on assignments from other classes is not allowed during class time.

## 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. There will also be an orderly procedure, designed to ensure social distancing, for exiting the classroom. Please refer to the Guidebook distributed at the Fall 2020 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 Statement

#### **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/ttpd/> (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.”

\*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](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.