

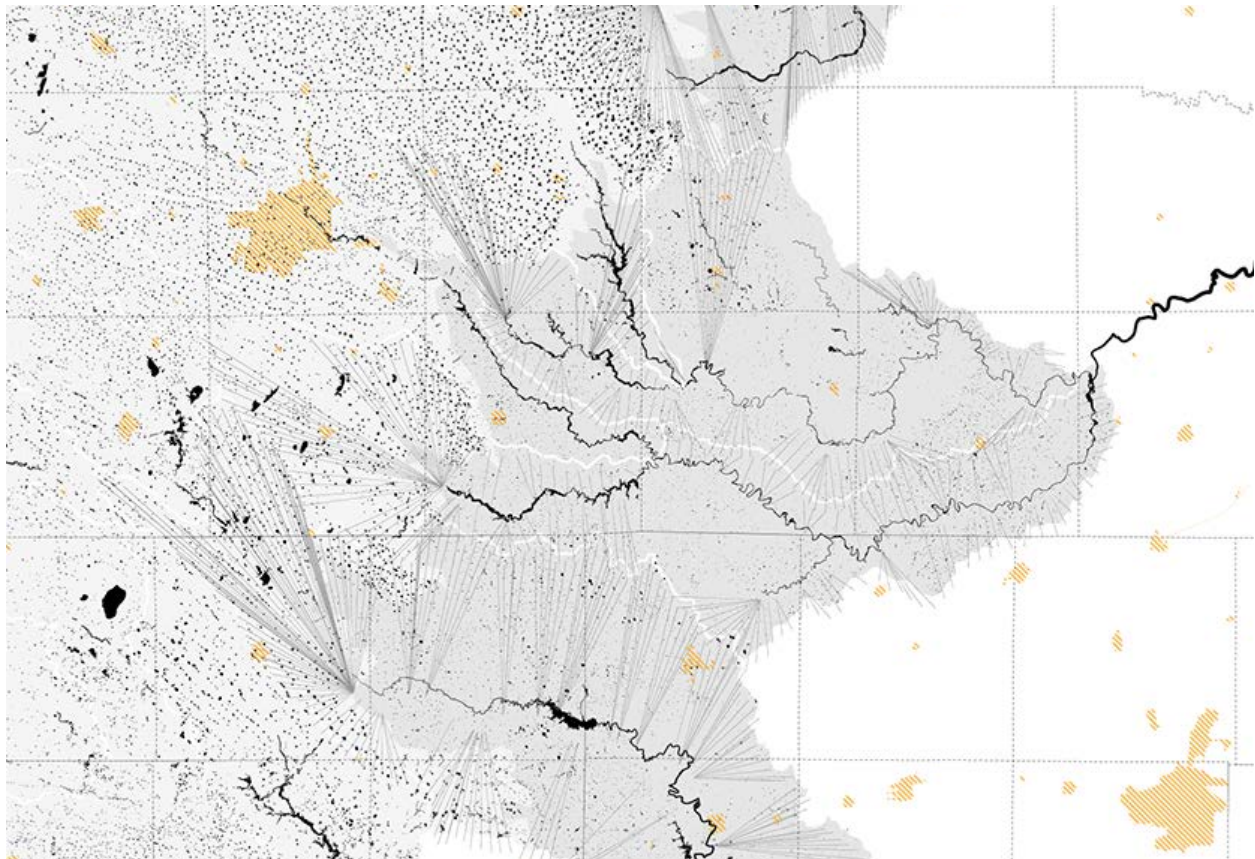
ARCH 3373 Environmental Analysis & Site Planning
College of Architecture, Texas Tech University
Fall 2021, ENG 304, Tuesday & Thursday 12:30-1:50pm

Instructor:

Victoria McReynolds, Assistant Professor, v.mcreynolds@ttu.edu, Office Rm 405,
Hours 2-3pm Thursdays & by appointment

Student Assistants:

Jacqueline Reyes, jacquirey@ttu.edu, Hours tbd
TBD



ENVIRONMENTAL ANALYSIS AND SITE PLANNING
Situating Architecture in a Changing Field

Catalog Description: Arch 3373-091. 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

During this semester we will explore the environment as an architectural design challenge. This lecture course combines standard architectural siting practices with innovative project examples in effort to develop design sensibilities that are resilient to increasingly unusual environment challenges. Our approach to site and the greater environment is one of an ongoing, integrative, system of relationships with architecture. Themes addressing terrain,

culture, atmosphere, and hydrology will demonstrate how the simple notion of “site as a place on which building sits” ignores a wealth of design opportunity for healthy sustainable solutions. These course themes reinforce site as a dynamic ecology of influencing factors. Architecture therefore is a construction of ideas and materials 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.

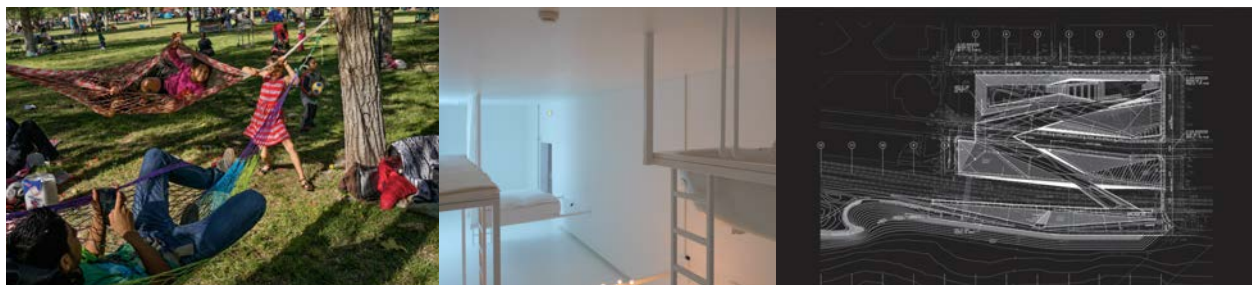
Environmental and sustainable strategies are no longer an exception to the design culture. Rather solutions to the increasingly complex site are approached with an integrative solution that takes into account immediate change and the long term vision. Our observations, understandings and implementations 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 following 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.
- Techniques for providing integrative environment solutions addressing themes on terrain, cultural, atmospheric, and hydrological factors

Means of Evaluation:

1. Deliverables -

- Wk 1 weekly notes postings
- Wk 2 quiz 01, 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 according to outline, engagement in course discussion with topically relevant contribution, engagement in course digital platforms, presentation quality and clarity of work, class quiz on reading and lecture content, course attendance, and submitted notes summarizing lecture and readings comprehension and questions.

Teaching Methods:

- Use of digital software to assess and organize environment features
- Use of case studies for analysis that identify key factors and require propose schematic design solution
- Lectures on course themes and site techniques
- Review of contemporary conditions, short topics on current events that shape site, architecture and design



Course Schedule Outline

WK1: Environment & Site, Intro / 4. Natural Systems

8/24, review course content & lecture

8/26, lecture & poll

WK2: Terrestrial / 3. Site Form

8/31, lecture & quiz 01

9/2, lecture & Case Study 01 introduced

WK3: Terrestrial / 32. Site Landscape

9/7, lecture

9/9, lecture & Homework 01 issued

WK4: Terrestrial / Bracket "Goes Soft"

9/14, lecture

9/16, lecture & Case Study 01 due

WK5: Cultural / 1. Values and Visions, 5. Context & Surroundings (beginning - views)

9/21, lecture & Homework 01 due

9/23, lecture & Case Study 02 introduced

WK6: Cultural / 38. Public Spaces

9/28, lecture

9/30, lecture

WK7: Cultural / 11. Learning about Users

10/5, lecture

10/7, lecture & Case Study 02 due

WK8: Atmospheric / 4. Natural Systems

10/12, lecture & quiz 02

10/14, lecture & Case Study 03 introduced

WK9: Atmospheric / 29. Electrical Energy

10/19, lecture, assessment team (tbd)

10/21, lecture & Homework 02 issued

WK10: Atmospheric / 5. Context & Surroundings (plans)

10/26, lecture

10/28, lecture & Case Study 03 due

WK11: Hydrological / 25. Surface Water

11/2, lecture & Homework 02 due

11/4, lecture & Case Study 04 introduced

WK12: Hydrological / 26. Water Supply

11/9, lecture

11/11, lecture

WK13: Hydrological / 27. Wastewater System

11/16, lecture

11/18, lecture

WK14: 11/23, Case Study 04 Progress Due

WK15: 12/4, 1:30-4pm, Final Examination

*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

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](#), 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 quiz, homework, case study, final project, and participation (inclusive of attendance and weekly notes) submitted in accordance with the course schedule. Evaluation is 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 "Reference, News, Links" completed by Sunday 11:59pm CT. 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 "Reference, News, Links". A minimum of one post and one response are to be made weekly.

Participation is inclusive of attendance (see description below), course engagement, weekly notes postings (as described above).

Quiz assess the proficiency of material covered in readings and lectures. Two quizzes are administered during the semester and are completed through blackboard asynchronously.

Homework is completed utilizing graphic software to produce analysis drawings. Two homework assignments are issued during the semester. The first assignment addresses challenges in topography regrading for site circulation. The second assignment addresses challenges in adaptation towards passive light and wind orientation.

Case Studies assess ability to implement site design thinking and strategies introduced through lectures and readings for one of the four semester themes. Case Studies encourage use of innovative problem solving to address the challenged outlined. Each Case Study provides specific assignment goal, learning objectives, steps, and requirements.

Everything relative to the course production is part of the process. Rubrics will be provide for homework and case study projects. 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	Quiz (x2)
30	Homework (x2)
30	Case Studies (x3)
10	Final Case Study Project

100% All Course Products

Grades are defined as follows (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.

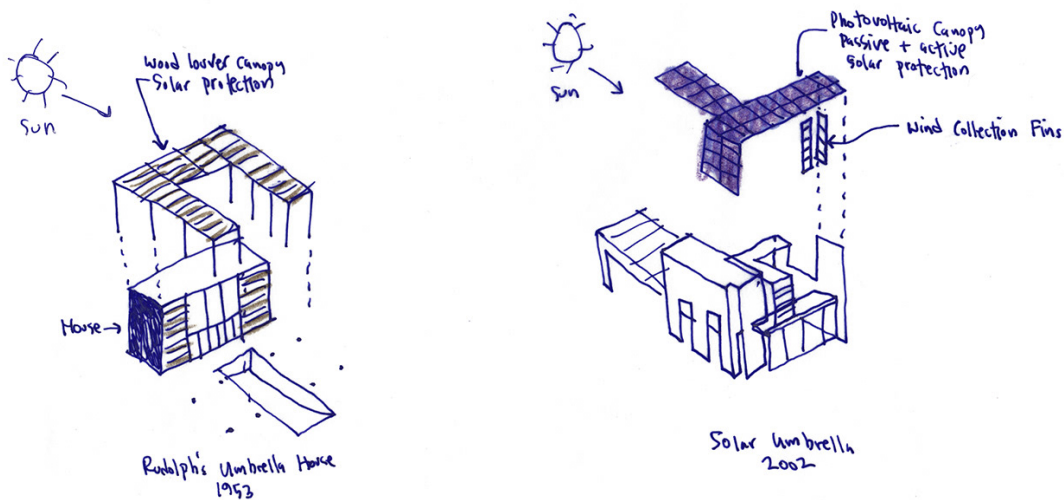
D - Unsatisfactory (60-69%) - Work that is often inaccurate or incomplete, not meeting the minimum requirements of the instructor. Rarely showing scholarly initiative, innovation, attempts, discrimination and discernment.

F - Unacceptable (0-59%) - work that is unacceptable therefore, not defined.

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

Retention of Work

I give the College of Architecture and Texas Tech University, and/or Texas Tech University System (herein, "Texas Tech") the absolute right and unrestricted permission to collect, use, publish, reproduce, edit, exhibit, project, display and/or copyright work created by me during the course of my education at Texas Tech, through any form (print, digital, physical model, broadcast or otherwise) at any campus or elsewhere, for art, advertising, future accreditation, visiting committees, recruitment, marketing, fund raising, publicity, archival or any other lawful purpose.



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.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](#)

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 (arriving after 5 minute start time), 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 Covering Policy: As of May 19, 2021, face coverings are now optional in TTU facilities and classrooms, and all other COVID-19 campus protocols have been lifted. It is highly recommended that those who have not been vaccinated for COVID-19 wear face coverings to help prevent the spread of the virus.

Seating Charts and Social Distancing: There is no longer a mandated social distancing protocol for classroom seating, but diligence is encouraged when indoors and not wearing masks. A seating chart might be used in the classroom to facilitate attendance, class interactions and other in-class engagement activities.

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. This course includes digital platforms (blackboard, ms teams, one-drive, and zoom) to facilitate synchronous and asynchronous learning.

In-Person Office Hours: Thursday from 2-3pm, masks are optional but social distancing is expected.

Personal Hygiene: We all should continue to practice frequent hand washing, use hand sanitizers after touching high-touch points (e.g., door handles, shared keyboards, etc.), and cover faces when coughing or sneezing.

Potential Changes: The University will follow CDC, State, and TTU System guidelines in continuing to manage the campus implications of COVID-19. Any changes affecting class policies or delivery modality will be in accordance with those guidelines and announced as soon as possible.

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 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/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).

LGBTQIA SUPPORT STATEMENT*:

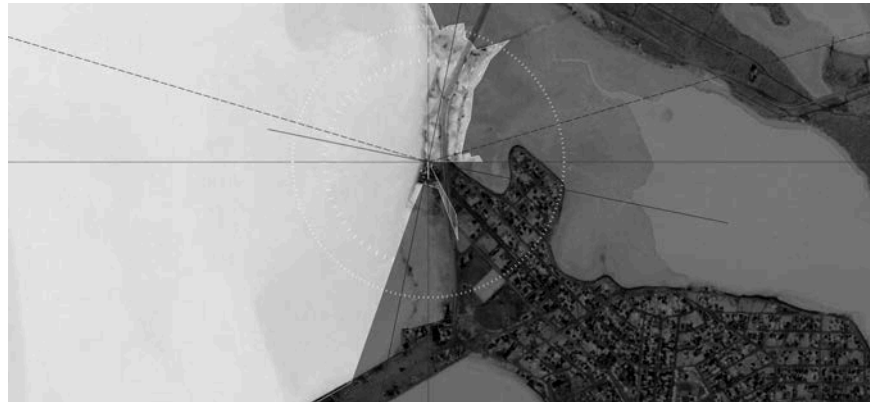
I identify as an ally to the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA) community, and I am available to listen and support you in an affirming manner. I can assist in connecting you with resources on campus to address problems you may face pertaining to sexual orientation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



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 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.
4. 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.