

Special Problems in Architecture

Community - Adaptable Mobile Health Care Facility

Arch 5301

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Course Description

Community - Adaptable Mobile Health Care Facility

How can portable, expandable space-frame structures be used to design mobile vaccination and examination centers for under-served urban and rural communities?

The lack of accessibility of health care facilities is often an obstacle to low-income families. Uninviting and labyrinthine health care centers can feel dehumanizing.

We propose a partially open plan layout that can quickly adapt to differing site conditions. This core is augmented by a set of expandable spaces that may be used for private medical exams, vaccinations, etc.

Because these portable/expandable structures can be modified to accommodate different settings in public spaces, these temporary health centers could be integrated with their environment. In addition, the open plan design of this mobile center offers the opportunity for people to feel that medical treatment is a choice.

Our ultimate objective is to create/offer comforting and inviting spaces to receive medical treatment.

Learning Objectives

This course is conceived to be fundamentally and aggressively exploratory. The research in this course will be both pure and applied. Portable, expandable space frame vaccination centers have never been designed or built – this course is the first of its kind. Together, we will all be Darwin, theorizing final design concepts throughout the semester.

Educational Goals

We start from making. When we say "making," we mean many things. We mean final products and sketch models, objects, and systems. We mean single prototypes, whole production runs, procedures, and experiences.

When we make, we use many materials. We work with wood, metal, plastic, paper, language, patterns, and behaviors. Some of our materials are physical and some are conceptual. Materials we use are old as history, some are just being discovered, and some we will invent ourselves.

We trust that the lessons of making are transferrable. Therefore, we focus on making to learn the skills and habits of mind of design. The lessons of precision, attention, responsiveness, and focus - learned at a bench - are just as applicable to creating new services, systems, and strategies as they are to the creation of new products and objects.

We make to ask questions. We construct artifacts to elucidate and uncover fundamental questions about material processes and larger political and cultural conditions. We use making to apply real insights and to test unproven ideas. We marshal our making skills for the social good and the creation of new value.

We start with craft, but we do not end there. We begin at the workbench. We design through a deep material understanding; through practice precisely crafting three dimensional models and roughing out working prototypes; through a rigorous attention to what we are working on and what the thing we are working on tells us.

We make because making makes us better.

Schedule

**Subject to change at instructor's discretion*

August 27- September 3	Research chair design and vaccination seating problems/solutions – begin making digital and physical sketch models, hand sketches, diagrams
September 3-10	Present Diagrams, research, models, sketches
September 10-17	Cardboard Chairs(plane) – understanding structure, craft, prototyping, discovery, exploration, and experimentation. Improve diagrams, research presentations.
September 17-24	Kites (line)– introduction to space frames, understanding structure, craft, prototyping, discovery, exploration, and experimentation. Continuing with sketches, diagrams, research.
September 24- October 1	Combine Chair and Kite concepts (plane and line)
October 1 - 8	Combine Chair and Kite concepts (plane and line)

October 8-15	Final chair designs – make assembly drawings, begin designing portable, expandable vaccination units
October 15-22	Assemble chair – present drawings
October 25-November 19	Design/Build portable, expandable vaccination units
November 19	Final Review – Research booklet, vaccination seating, portable, expandable vaccination unit

Final Course Grade

%	Deliverable
12%	Cardboard Chair/Research
5%	Kite
15%	Cardboard Chair/Kite Combination Concept
25%	Final Chair/Assembly Drawings
25%	Portable, Expandable Vaccination Units
8%	Individual and Peer evaluation-each member of the team will be asked to evaluate their project, their collaboration contribution and each of their collaborator's contributions.
10%	Participation

Evaluation

Evaluation of student performance is based upon the ambition of weekly progress and the resolution of final products presented. Persistent production and hard work are expected. Improvement and growth are essential.

The general criteria will consider the following:

- (1) strength of design concept & proposal.
- (2) articulation and development of design in an iterative process
- (3) technical competency, clarity, and craft.
- (4) clear design position and strategy as communicated in words/models/graphics
- (5) passion, commitment, dedication, and rigorous work ethic.

Instructor conducts expert reviews of overall student performance, relative to all students in the course, following major stages of the semester. Evaluations are based on years of experienced review of student work and are not negotiable. Evaluation are considered relative to intention, development, and resolution of each project on a 0-100 scale.

COVID 19 Information

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.

UNIVERSITY and COLLEGE POLICIES

ACADEMIC REGULATIONS

Please consult the [Texas Tech University Undergraduate and Graduate Academic Catalog 2018-2019](#) and the [Texas Tech University Student Handbook](#) for information about dropping a course, reporting illness, absence due to religious observance and academic integrity.

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

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

"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

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 of Student Conduct](#), (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, 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, 806-7637273, (24-hour hotline that provides support for survivors of sexual violence.) The Risk, Intervention, Safety and Education (RISE) Office, 806-742-2110, (Provides a range of resources and support options focused on prevention education and student wellness.) Texas Tech Police Department, 806-742-3931, (To report criminal activity that occurs on or near Texas Tech campus.)

Civility in the Classroom

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. Consult TTUs Statement of Ethical Principles.

LGBTQIA Support

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.

ATTENDANCE

The CoA's Attendance Policy states that students are responsible for attending all scheduled class meetings for the full class period. A total of four (4) absences is considered excessive, requiring the student to drop the course or receive a grade of "F" in compliance with drop deadlines. Arriving late or leaving early will be recorded as a partial absence. All absences are considered unexcused except absences due to religious observance or officially approved trips. Students are expected to comply with rules for reporting student illness requiring absence from class for more than one week or immediate family member deaths. See Academic Regulations. Attendance is defined as full participation in all studio activities including group and individual critiques, lectures, presentations, demonstrations, discussions, in class assignments, and possible field trips. Attendance requires students to have the necessary tools and supplies available for all studio activities (i.e.: computer, drawing and modeling materials, and shop safety equipment). Excessive tardiness, leaving early, lack of participation, walking in and out, undivided attention, goofing around, and disruptive behavior will be recorded as an absence. Working on assignments from other classes is not allowed during class time.