ARCH 3601 | 311 LIM | PROJECT STATEMENT

ARCHITECTURE THAT FIGHTS PANDEMICS:

Designing a student living neighborhood and the new normal of student campus life

People visit New York's Domino Park on May 17. The painted circles, spaced 6 feet apart, are to encourage physical distancing. Johannes Eisele/AFP/Getty Images
Image source: https://www.cnn.com/2020/05/20/world/gallery/new-normal-coronavirus/index.html

MINI TOPICAL: ARCH 3601 | 311

ARCHITECTURE THAT FIGHTS PANDEMICS
Designing a student living neighborhood and the new normal of student campus life

This studio is about developing provocative design statements for student living neighborhood in response to pandemics. Students will imagine and suggest new possibilities for future student lifestyle on campus, the new and safe way of learning, eating, exercising, etc. through design. Students will design the student living neighborhood located in Texas Tech University Lubbock campus, in relation to the private and public student living spaces, and the broader context including the campus and the city. The course is a critical lesson in developing students' design thinking skills, analyzing precedents, and learning the role of architects in response to communal values.

Pandemic and the new normal. The history of this pandemic is still being written. The death toll continues to climb, and the world is trying to find a vaccine. While we all are waiting for the moment it ends, it is continuously changing the way we live.

Most places were closed, we were working and learning at home, and we were meeting virtually. Businesses and schools are reopening, but everything looks much different. We continue to keep our social distance from each other, wear face coverings, or even personal protective equipment to live our daily lives. It has changed the way we walk, watch a movie, enjoy the park, dine, and exercise, and so on.

Some believe it will never be the same as they were before; and what we should be doing now is to make the new normal a good one. This is the moment to really think about how architecture can help and lead the change.

People participate in an outdoor yoga class in Toronto on June 21.Carlos Osorio/Reuters | Image source: https://www.cnn.com/2020/05/20/world/gallery/new-normal-coronavirus/index.html

GHESKIO Cholera Treatment Center © Iwan Baan, MASS Design Group | Image source: https://massdesigngroup.org/work/design/gheskio-cholera-treatment-center

Improve health through design. Architecture and built environments play significant roles in infection control. Purposefully designed spaces can support the prevention and treatment of infectious diseases.[1] It can not only control the transmission of infectious agents but also regulate the way users behave. Architecture can decrease the opportunity to contact contagion by providing ample and clean airflow, by building an effective system, or by designing spaces that are conducive to infection control.[2] Designed spaces can also regulate the way people interact with each other.[3] It can ensure social distancing between the users, and it can define the way people talk to each other, dine together, learn together, and so on.

In order to support the transition into post-pandemic, groups of experts including designers, engineers, and public health experts are providing design guidelines for safer restaurants, outdoor dining spaces, streets, schools, and offices,[4] indicating the critical role of architecture in fighting pandemics.

Define future student life on campus under a hypothetical situation. The studio will explore the design of a future student living neighborhood—where students live, learn, eat, and so on—under a hypothetical situation: the pandemic will not end for a while, nevertheless, the higher education will continue, and students will live on campus. However, the students' life on campus will change and architecture can help and lead that change while making students' campus life safer and enjoyable.

This studio will focus on the design of student living neighborhood where various activities can happen and interconnected with the broader context. We are not calling it as a dorm or a residence hall since it will (and should) accommodate the new student lifestyle. Through the design of the student living neighborhood, students will imagine and suggest the new way of learning, living, dining, exercising, and so on, within the broader context, such as the educational system, the campus, and the city. The projects are not about suggesting adjustments to the existing building types and layouts. But rather, they will generate imaginary and provocative design statements defining the new campus lifestyle, leading the changes, improving the health and safety of the community through design.

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[1] Zimring, C., Jacob, J. T., Denham, M. E., Kamerow, D. B., Hall, K. K., Cowan, D. Z., ... & Steinberg, J. P. (2013). The role of facility design in preventing the transmission of healthcare-associated infections: Background and conceptual framework. *Health Environments Research & Design Journal*, 7(1_suppl), 18-30.

[2] Michael Murphy. (2020). The role of architecture in fighting a pandemic. The Boston Globe.

[3] Hillier, B., Hanson, J., & Peponis, J. (1984). What do we mean by building function? In J. A. Powell, I. Cooper, & S. Lera (Eds.), Designing for building utilisation (pp. 61-72). London, UK: E & F.N. Spon Ltd.

[4] Christele Harrouk. (2020). 7 Design Guidelines for a Safe Post COVID-19 Transition. ArchDaily. (https://www.archdaily.com/941517/5-design-guidelines-for-a-safe-post-covid-19-transition)

Moriyama House Tokyo by Ryew Nishizawa | Image source: http://ideasgn.com/architecture/moriyama-house-tokyo-by-ryue-nishizawa/

Site

Specified location(s) in Texas Tech University Lubbock campus.

Program Elements

Students will propose programs based on their research and precedent analysis. The proposed programs should include the following two main components:

- Public program shared by occupying students and other students on campus.
- Private student living spaces accommodating 400 students.[5]

Bosco Verticale buildings, a pair of "vertical forests," in Milan, Stefano Boeri Architetti | Image source: https://www.stefanoboeriarchitetti.net/en/project/vertical-forest/

[5] In August 2020, about 7,600 students moved into 19 residence halls (https://www.kcbd.com/2020/08/08/safety-is-first-priority-texas-tech-students-return-student-housing/). We will design a residence hall accommodating 400 students.

Means of Evaluation

Studio Structure and Deliverables. The studio will run over 16 weeks (including the Thanksgiving holidays) and follow the steps below.

I. Research and scenario development | 2 weeks
Week 01 | pandemic and the role of architecture research
Week 02 | future student life scenario statement and representational images

II. Precedent analysis | 2 weeks
Week 03 | precedent analysis 1 represented in text, sketches, diagrams, drawings and images
Week 04 | precedent analysis 2 represented in text, sketches, diagrams, drawings and images

III. Program and design ideation | 2 weeks
Week 05 | abstract design concept statement and drawings
Week 06 | abstract design concept models

IV. Design realization | 7 weeks
Week 07 | site analysis diagram/drawing and site plan (1/32" or 1/16")*
Week 08 | programming, plan and section drawings (1/16" or 1/8")*
Week 09 | **mid-review**, review reflection
Week 10 | revision of plan and section drawings (1/16" or 1/8")*
Week 11 | longitudinal section perspective (1/4")*
Week 12 | atmospheric perspectives
Week 13 | all diagrams, drawings, perspectives due

V. Representation and visualization | 3 weeks
Week 14 | narrative development, presentation outline, representation refinement
Week 15 | representation refinement
Week 16 | **final-review** and final deliverable submission

In addition, each student will need to submit file(s) for each studio day before the studio so the instructor also has an access to the files that the student wants to talk about.
** Scales of drawings are subject to change.*

Methods of Assessment
Completion and submission of all required deliverables in a timely manner
Design criticism by individual instructors and assembled design juries
Thoughtful engagement with critical questions regarding context
Insightful inquiry or contribution to studio wide discussions

Teaching Methods/Studio Methods

Manual sketches and diagrams
Modeling in Rhino
Volumetric analysis
Relational drawings
Development of conceptual and abstract models
Translating the set of conceptual models into volumetric and relational models
In-studio discussion and reflection of design critiques

Course Schedule

Week 1	08/24 M	first day of studio: all school meeting	
	08/26 W	project issued	
	08/28 F	research: design strategies for architecture responding to pandemics	
Week 2	08/31 M	future student life scenario development	
	09/02 W	representational images illustrating the scenario (collage, drawings)	
	09/04 F	virtual pin-up: imaginary future student life scenario (text, images)	
Week 3	09/07 M	*labor day holiday*	
	09/09 W	precedent research and analysis 1 (text, drawings, images)	
	09/11 F	virtual pin-up: precedent analysis and interpretation 1	
Week 4	09/14 M	precedent research and analysis 2 (text, drawings, images)	
	09/16 W	representation of precedents in sketches, drawings and images	
	09/18 F	virtual pin-up: interpretation of precedents 1 & 2	Research booklet due
Week 5	09/21 M	design concept development (text, images)	
	09/23 W	representation of design concept (drawings, diagrams)	
	09/25 F	virtual pin-up: abstract concept drawings and diagrams	
Week 6	09/28 M	abstract models (at least 3 different strategies)	
	09/30 W	revised concept statement and abstract models	
	10/02 F	virtual pin-up: revised concept statement, drawings and models	
Week 7	10/05 M	site analysis illustrated in diagrams and drawings	
	10/07 W	site plan (1/32” or 1/16”)	
	10/09 F	virtual pin-up: site analysis diagram/drawing and site plan	
Week 8	10/12 M	programming and draft of 3d model, plan and section drawings	
	10/14 W	refinement of 3d model, plan and section drawings	
	10/16 F	virtual pin-up: plan and section drawings (1/16” or 1/8”)	
Week 9	**10/19 M**	**MID REVIEW**	Presentation due
	10/21 W	review reflection and revisit of design concept	
	10/23 F	revised 3d model, diagrams, drawings	*Progress grade 1*
Week 10	10/19 M	refinement of site plan, floor plan and section drawings, 3d model	
	10/21 W	refinement of site plan, floor plan and section drawings, 3d model	
	10/23 F	virtual pin-up: revised site plan, floor plan and section drawings	
Week 11	10/26 M	draft of longitudinal section perspective (1/4”)	
	10/28 W	refinement of longitudinal section perspective (1/4”)	
	10/30 F	virtual pin-up: longitudinal section perspective (1/4”)	
Week 12	11/02 M	draft of atmospheric perspectives (at least three scenes)	
	11/04 W	refinement of atmospheric perspectives (at least three scenes)	
	11/06 F	virtual pin-up: atmospheric perspectives (at least three scenes)	
Week 13	11/09 M	refinement of all diagrams, drawings, perspectives	
	11/11 W	refinement of all diagrams, drawings, perspectives	
	11/13 F	virtual pin-up: all diagrams, drawings, perspectives	All drawings due
Week 14	11/16 M	narrative development, presentation outline	*Progress grade 2*
	11/18 W	representation refinement	
	11/20 F	representation refinement	
Week 15	11/23 M	internal final review	
	11/25 W	*thanksgiving vacation*	
	11/27 F	*thanksgiving vacation*	
Week 16	**12/1 T**	**FINAL REVIEW**	Presentation due
	12/04 F	complete digital course work archive	Final deliverables due
	12/14 M	final grades	*Final grade*

Readings

Required readings for this section. Further readings will be provided on a rolling basis.

Michael Murphy. (2020). The role of architecture in fighting a pandemic, The Boston Globe.

Christele Harrouk. (2020). 7 Design Guidelines for a Safe Post COVID-19 Transition, ArchDaily.

The American Institute of Architects. (2020). Reopening America: Strategies for Safer Schools & Strategies for Safer Multifamily Housing.

MASS Design. (2020). Designing Senior Housing for Safe Interaction, The Role of Architecture in Fighting COVID-19

Lauren Scranton. (2018). Architecture + Human Behavior: Strategies for Enhancing Wellbeing in Residence Halls. NAC Architecture

Strange, C. C., & Banning, J. H. (2015). Chapter 1 Physical Environments: The Role of Place and Design. In Designing for learning: Creating campus environments for student success (pp.9-48). John Wiley & Sons. (Available via Blackboard)

Peter Blake. (1977). The Fantasy of Housing. In *FORM FOLLOWS FIASCO: Why modern architecture hasn't worked* (pp. 121-132). Boston: Little, Brown. (Available via Blackboard)

Cristina Díaz Moreno & Efrén García Grinda. (2004). LIQUID PLAYGROUNDS [FRAGMENTS OF A COVERSATION]. In El Croquis 121/122: SANAA, Kazuyo Sejima – Ryue Nishizawa 1998-2004. (Available via Blackboard)

Allen, S. (1998). Diagrams Matter. *ANY: Architecture New York*, (23), 16-19. (Available via Blackboard)

Tanizaki, J. (1977). *In praise of shadows.* Leete's Island Books. (eBook available via TTU Library)

De Solà-Morales, M. (1989). The Culture of Description. *Perspecta, 25*, 16-25 (Available via Blackboard)

Course Requirements

Digital Submissions. Digital scans, drawings, and photographed images of physical models will be submitted according to specific formats at designated times throughout the semester.

Sketchbooks. Students must keep a journal of studio thoughts (sketches, notes, drawings, etc.). The journal is crucial to reflective thinking and a vital record of critical ideas and explorations reflected in each student's project. It must be available every day.

Personal computer and applications. Students must provide and maintain their computer (laptop) used for the studio (refer to college website for Minimum Computer Requirement). This studio will use Adobe Creative Suite (including Photoshop, Illustrator, InDesign and Acrobat), and Rhino 3D. 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.

Digital camera/scanner. Documenting work and field conditions (minimum of 12 megapixel resolution) are essential tools of architects. Students must document and digitize their manual work regularly. Such equipment is also available in the College PRINT BUREAU.

Printer(s). Inkjet printer for small desktop printing in studio or at home aids design process and review. Printing is also available in the College PRINT BUREAU. Be prepared to print as much as required to support design development, especially for the studio pin-ups.

Desk tools. Students must maintain at their desk an architect and engineering scale, rolls of white or yellow trace paper, and drawing utensils. While most deliverables of this studio are digitized, manual drawings and sketches are also required as part of the design process.

Time Management. Students are expected to work intelligently and efficiently, though not necessarily longer. Students are expected to dedicate 12 hours in studio class time and, at minimum, twice that time (24 hours) outside of regular scheduled class periods per week in order to effectively investigate and execute studio assignments and meet studio progresses.

Grading

Evaluation of student performance is based upon daily studio progress, formal presentations during mid-and final-reviews, and the resolution of final deliverables. Studio instructor will conduct expert reviews of overall student performance. Evaluations are considered relative to (1) intention (clarity and strength of concept), (2) development (persistence of effort and evolution), and (3) representation (refinement of craft and communication) of the work. The general criteria will consider the following: strength of idea, articulation and development, process, technical competency, clarity, craft, clear architectural position as communicated in words/models/drawings, passion, commitment, dedication and rigorous work ethic.

Progress grades will be provided twice during the semester, and the final grade will be given after the submission of final deliverables. Attendance and participation are vital to success in this studio (be sure to review the Attendance Policy in the syllabus). All work must be completed on time. Expect substantial grade reductions for late or incomplete work. No extra credit is available in this course. A grade of 'C' or above is required to pass this course.

Grade distribution of the final grades is as follows.

Research and precedent analysis (I & II): 10%
Program and design ideation (III): 20%
Design process and realization (IV): 30%
Representation and visualization (V): 25%
Participation and engagement: 15%

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 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.