

Recipients of the 2019 Teeny Simmons' Award

LOUISIANA

LSBAE



STATE BOARD OF ARCHITECTURAL EXAMINERS

**Louisiana Architecture Education & Research Fund,
Funded by Louisiana Licensed Architects**

Architecture Education and Research Fund Program Launched

In 2016, the Louisiana State Board of Architectural Examiners received statutory authority to allocate up to ten percent of all license renewal and delinquent fees each fiscal year to fund a program that would better prepare students for internships and future careers as architects by making awards to NAAB-accredited architecture programs in Louisiana. The *Louisiana Architecture Education and Research Fund* is intended to be used by these programs to increase the understanding of issues central to an architect's responsibility for the public's health, safety, and welfare and issues central to practice. Examples of how the funds may be used include integration of practice and education into the professional NAAB degree curriculum; implementation of an integrated path-to-licensure program resulting in an architectural license at the time of graduation from a NAAB-accredited professional degree program; facilitation of enrollment and completion of training requirements for the Architectural Experience Program (AXP); and assisting students and interns in preparation for taking the Architectural Registration Exam (ARE).

Rules surrounding the program's implementation were adopted in February 2018, and the program was launched shortly after that. Three of the four NAAB-accredited programs submitted proposals that the board approved. Awards were granted to Louisiana State University, the University of Louisiana, Lafayette, and Louisiana Tech University for programs launched in the 2019-2020 academic year. Despite setbacks and delays due to the pandemic, all three universities completed their programs associated with the inaugural round of awards.

Awards granted through the fund are called the "*Teeny Simmons' Award*." Simmons guided emerging professionals and architects through the ever-evolving registration process for 41 years, retiring in November 2016. She was honored with a prestigious commendation by the Louisiana House of Representatives in June 2016 for her selfless and outstanding service to the architects in Louisiana and around the country. Teeny prided herself in supporting the board's mission to protect the public's health, safety, and welfare to ensure that those practicing architecture in Louisiana are doing so safely and sustainably. She was known for her trademark warmth and genuine interest in the well-being of others. Shortly after her retirement, Teeny lost a valiant battle with cancer in December 2016.

The board is excited to continue supporting this program, identifying another way to support the development of future architects and honoring the memory of one who served the profession with passion and humility for so long.



LOUISIANA TECH
— UNIVERSITY —

INTEGRATIVE ASSEMBLIES

metal panels randomized into a ratio of 1:3
typ. - steel stud
interlocking metal panel seating system
primary w24x145 beam
4" x 8" HSB-i-b

skylight system w/ flashing, blocking, and sealant
metal

roofing aluminum vented hat channel system w/ fasteners
3' x 15' metal roof panels
vapor barrier
weather barrier
roof insulation
concrete overlay
composite roof decking

typ. hvac system
main sprinkler line
typ. sprinkler system

FACULTY OFFICE

LED light strip
colorized sat metal panel ceiling
lightweight ceiling supports

8" x 8" HSB curtain wall structure
1" diameter tubed steel curtain wall connection

strip light
cove light
gypsum ceiling board
recessed can lighting
4" metal ceiling stud
2" metal stud for interior wall
aluminum ceiling
perforated metal

HALLWAY

interior glazing
interior aluminum mullion system

MULTI-MEDIA EXHIB

EAST ATRIUM

interior ceiling
flexible - standard 100 gpm
metal rod guard rail
guard rail base system

light weight ceiling framing
LED light bar
baffle ceiling
Red Ceiling - 1/2" dia. pipe

cove lighting
gypsum ceiling board
linear diffuser
recessed can lighting
interior metal paneling
Aluminum - 1/2" dia. pipe

LED light
acoustic wall/ ceiling paneling

HALLWAY

XL LECTURE



A great building must begin with the immeasurable, must go through measurable means when it is being designed, and in the end must be unmeasured.”

—

Louis Kahn



School of Biological Sciences,
Wesley Cagle, 2021

Integrative Assemblies

The Master of Architecture program within Louisiana Tech University's School of Design has an academic environment committed to understanding and developing building assemblies as a driver of design and a foundation for professional understanding. The degree's primary studio focus is a nine-month comprehensive integrated design project which allows students to develop their personal vision for a given project within a robust tectonic educational model. Our goal is the thoughtful use of physical and digital craft/tectonics in the making of contemporary places informed by timeless architectural principles.

In 2019, the M. Arch program was fortunate to receive funding from the LSBAE Mary "Teeny" Simmons Architecture Education and Research Fund. This grant was to implement a structural engineer consultancy program to build a stronger connection to the practice of architecture, the understanding of structure, and enhanced integration of practice into education. Robby Vogel, Stantec principal and structural team leader for Texas, served as our consultant. This introduced students to the important relationship architects have with structural engineers. Students in the professional degree had to engage with their proposals beyond the speculative, developing and integrating well-resolved structural solutions to the design process, connecting students to the real-world scenario of engaging in dialog with consultants, developing compromises, and implementing alternatives while still achieving design goals.

The work contained here shows the results of this process: Integrative Assemblies.

Section one shows design development in the areas of façade and structure, highlighting the complex structural solutions developed with the consultant. Section two shows building development using enlarged building fragments that investigate layers of assembly of envelope, structure, and interior spaces. Section three presents richly developed wall sections with detailed material and systems understanding. Section four contains a selection of final presentations and renderings of the projects. In total, the work shown presents a full-bodied understanding of key aspects of the degree program.

—
Damon E. Caldwell



SECTION 1

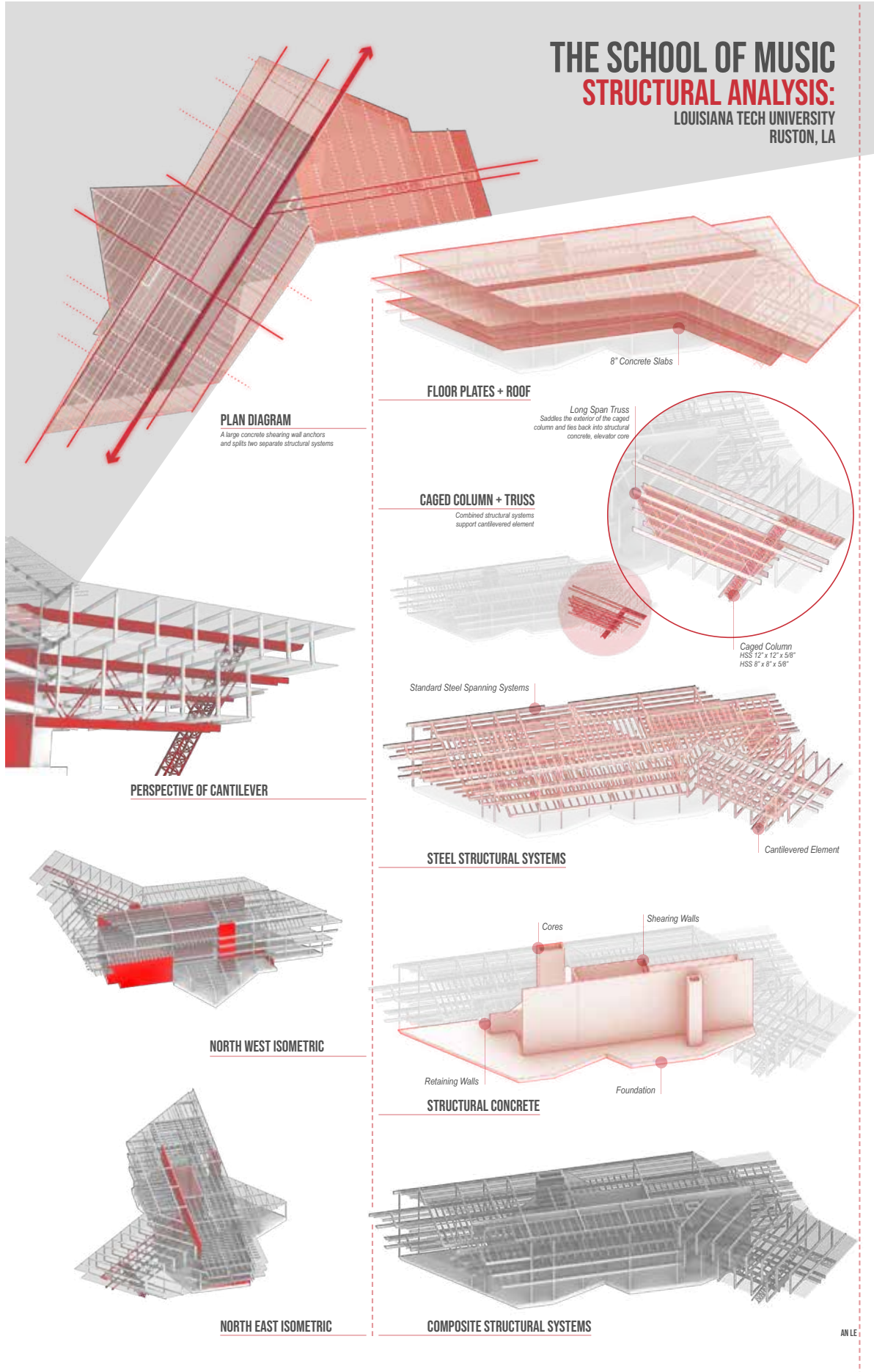
STRUCTURE AND FAÇADE

After initial programming and schematic design, students move to developing the tectonics. They are charged with rigorous investigation of both the structural and façade assemblies of their projects. For structure, detailed systems assemblies are developed with the aid of a consulting structural engineer. These illustrate primary, secondary, and tertiary structural elements; presented as both assembled and exploded axonometrics for the building. For facades, students investigate and develop the various facades of their design, with emphasis on material, pattern, seaming, texture, depth, and opacity.

THE SCHOOL OF MUSIC

STRUCTURAL ANALYSIS:

LOUISIANA TECH UNIVERSITY
RUSTON, LA



PLAN DIAGRAM

A large concrete shearing wall anchors and splits two separate structural systems

FLOOR PLATES + ROOF

8" Concrete Slabs

Long Span Truss
Saddles the exterior of the caged column and ties back into structural concrete, elevator core

CAGED COLUMN + TRUSS

Combined structural systems support cantilevered element

Caged Column
HSS 12" x 12" x 5/8"
HSS 8" x 8" x 5/8"

Standard Steel Spanning Systems

STEEL STRUCTURAL SYSTEMS

Cantilevered Element

PERSPECTIVE OF CANTILEVER

NORTH WEST ISOMETRIC

STRUCTURAL CONCRETE

Cores

Shearing Walls

Retaining Walls

Foundation

NORTH EAST ISOMETRIC

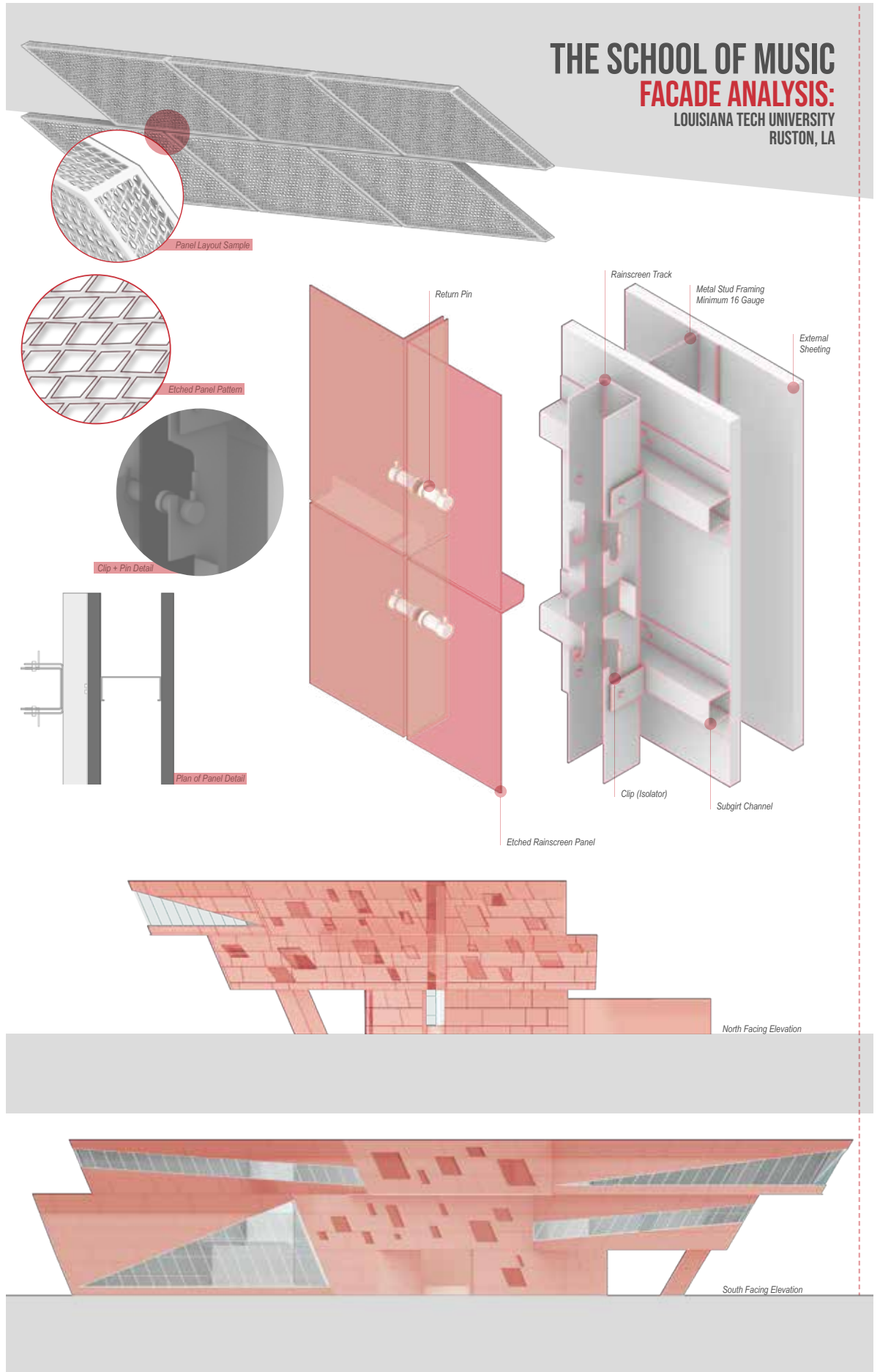
COMPOSITE STRUCTURAL SYSTEMS

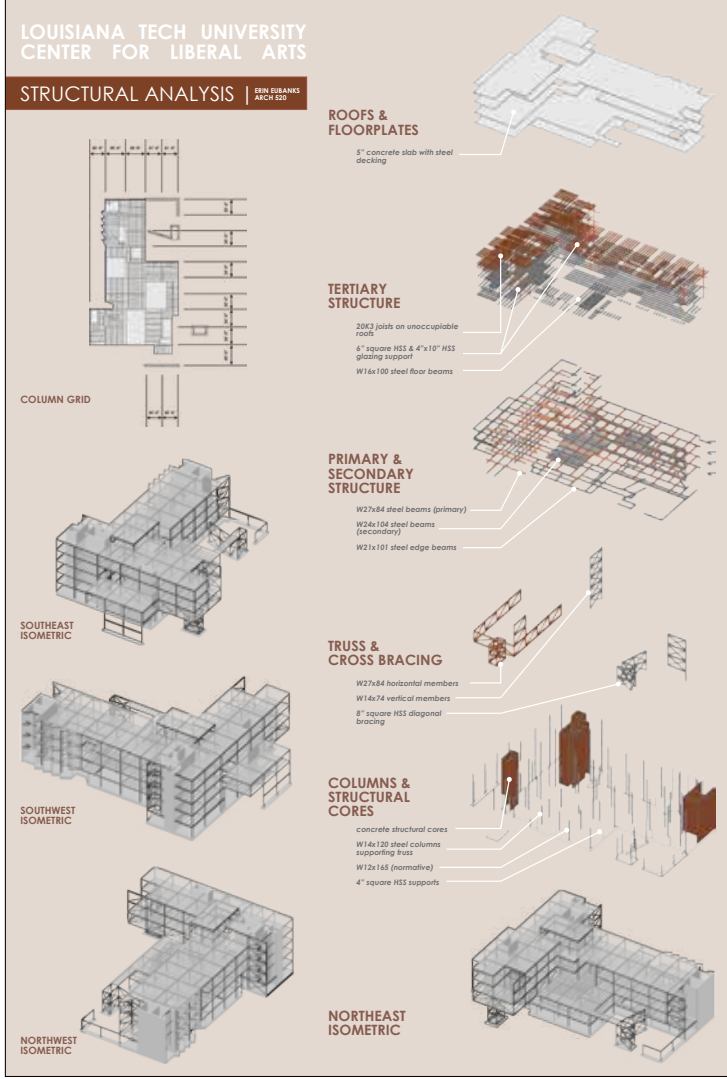
AN LE

THE SCHOOL OF MUSIC

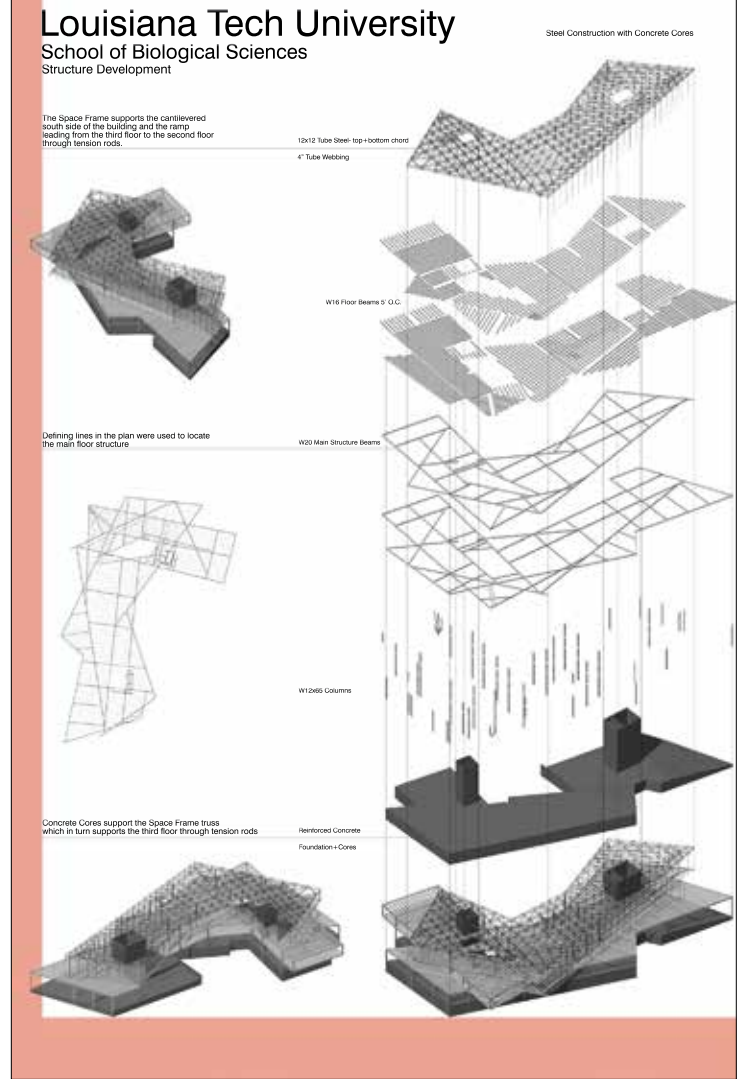
FACADE ANALYSIS:

LOUISIANA TECH UNIVERSITY
RUSTON, LA

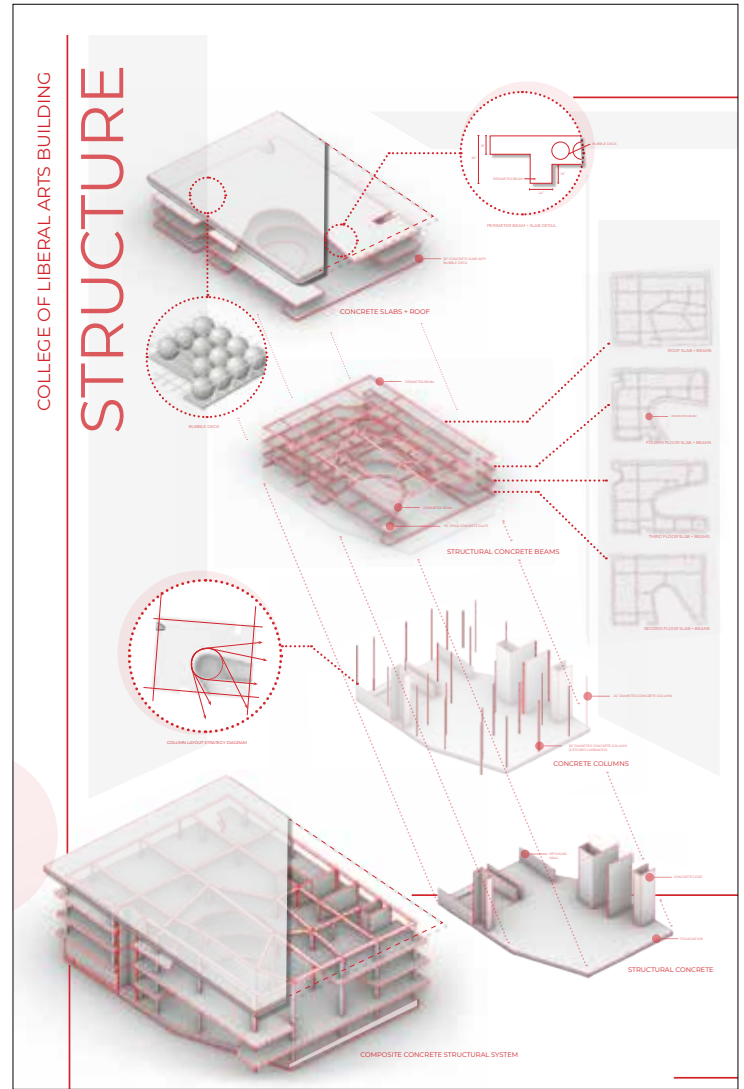
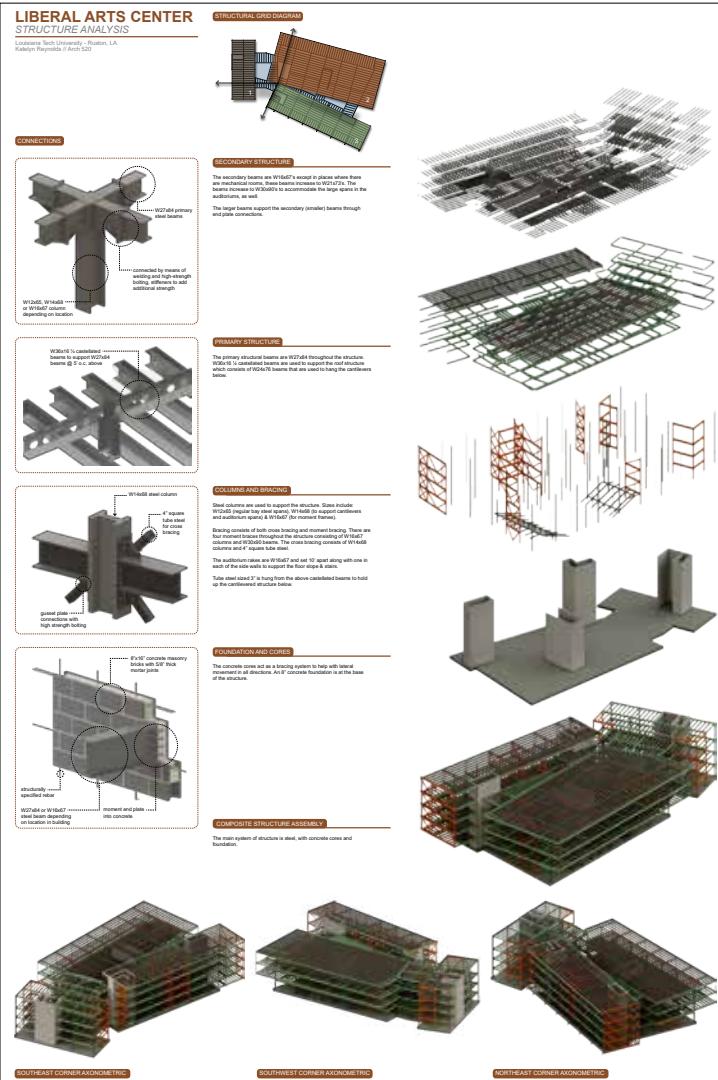




Structural Analysis,
Erin Eubanks, 2021

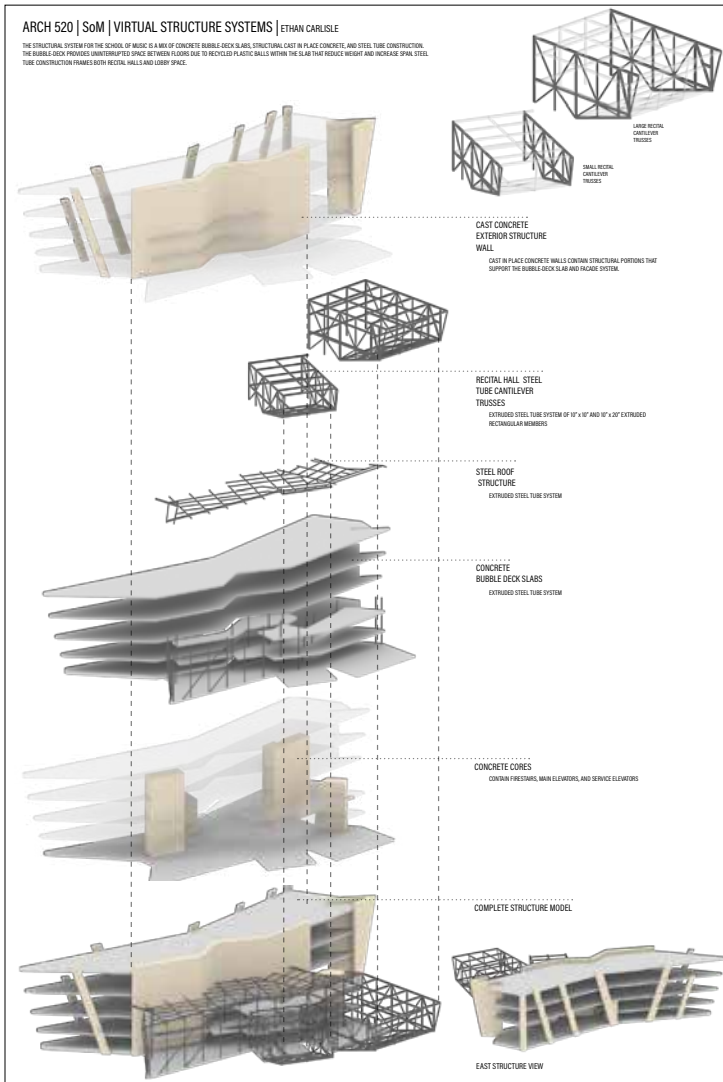


Structural Analysis,
Justin Neu, 2020

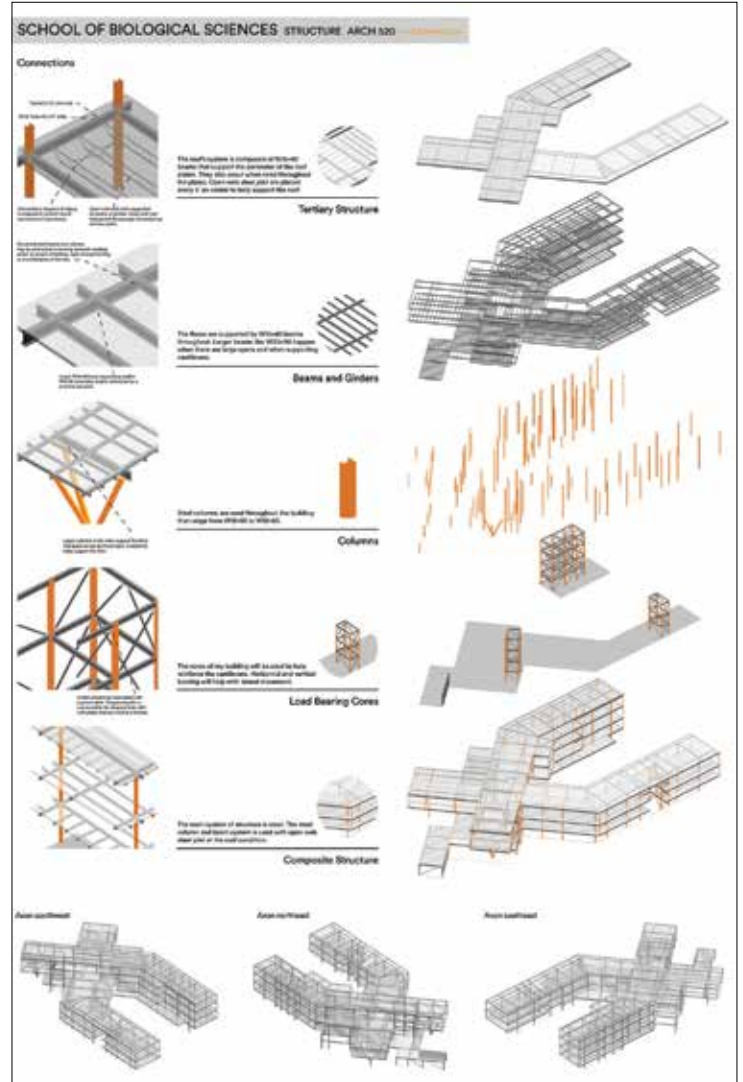


Structural Analysis,
Katelyn Reynolds, 2021

Structural Analysis,
Danai Metoyer, 2021



Structural Analysis,
Ethan Carlisle , 2019



Structural Analysis,
Kade Brandon, 2020



2

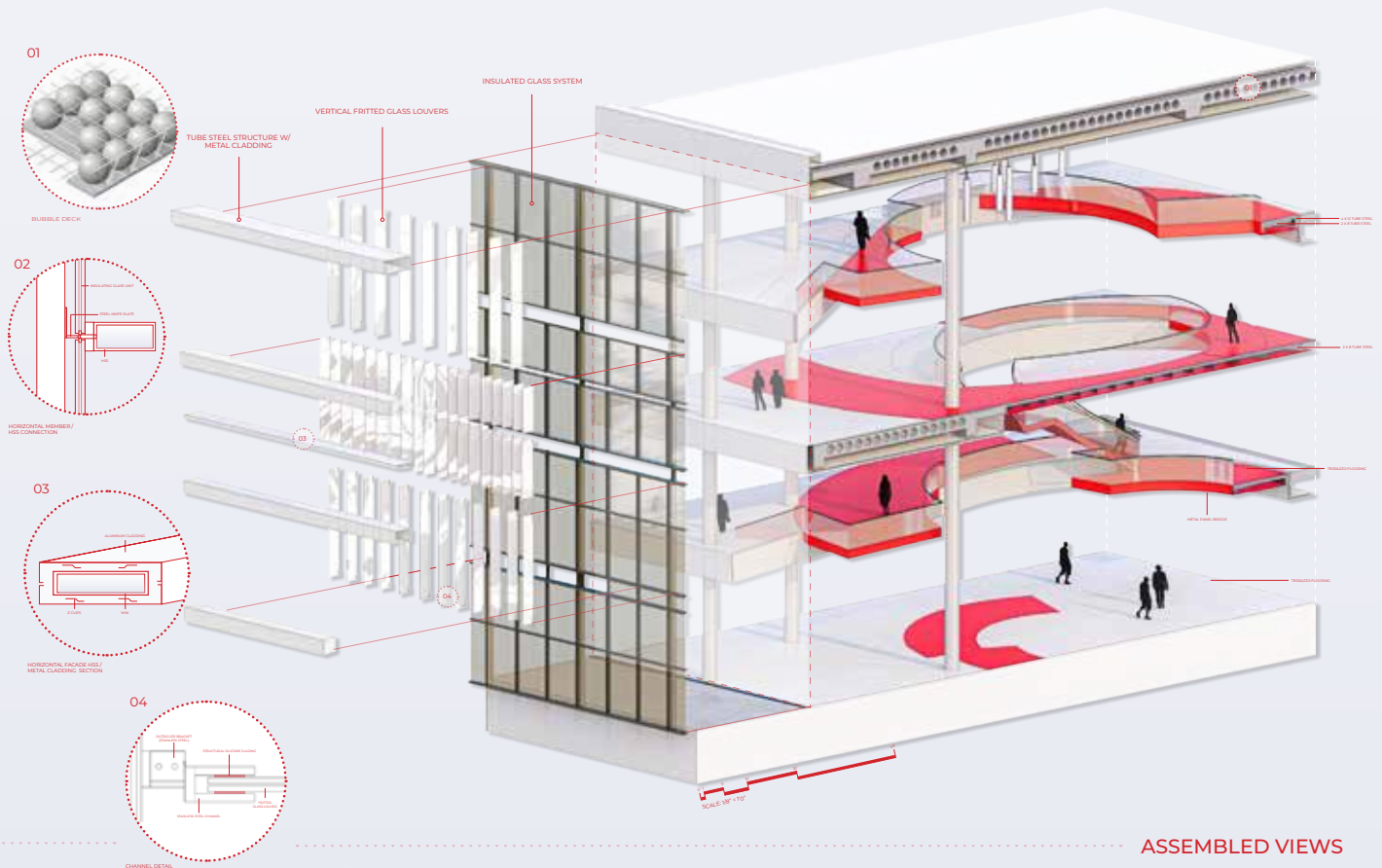
SECTION 2

BUILDING FRAGMENTS

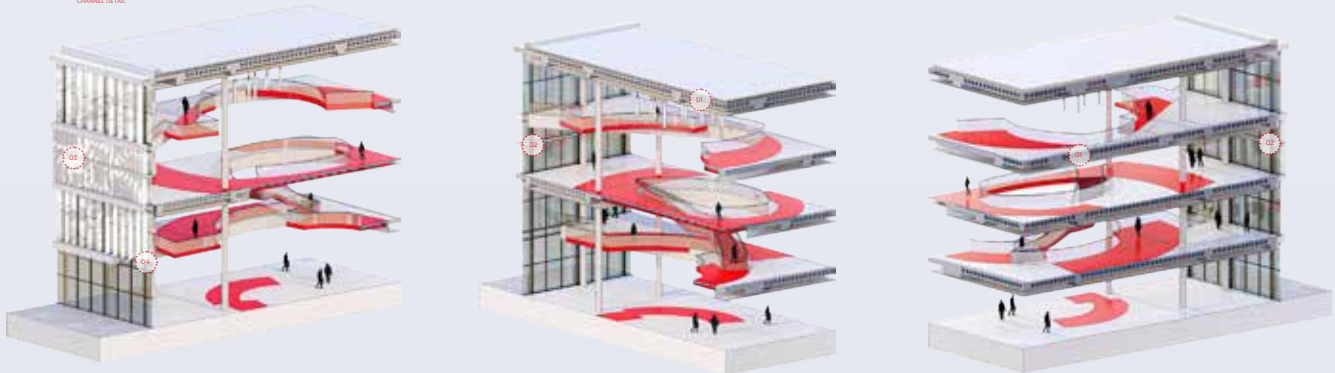
In this phase, students isolate and enlarge a rich and representative three-dimensional fragment of their building. The goal is an integrated investigation of the various spatial, structural, and envelope systems of their design. The fragment is understood as a layered assembly of tectonic and experiential conditions that work together to achieve a complex whole. Integration of exterior and interior, above and below, envelope and experience, technical and phenomenological, is facilitated through this investigation. Solutions developed here are then applied to the building as a whole.

COLLEGE OF LIBERAL ARTS BUILDING

BUILDING ENVELOPE DEVELOPMENT TECTONIC INVESTIGATION



ASSEMBLED VIEWS

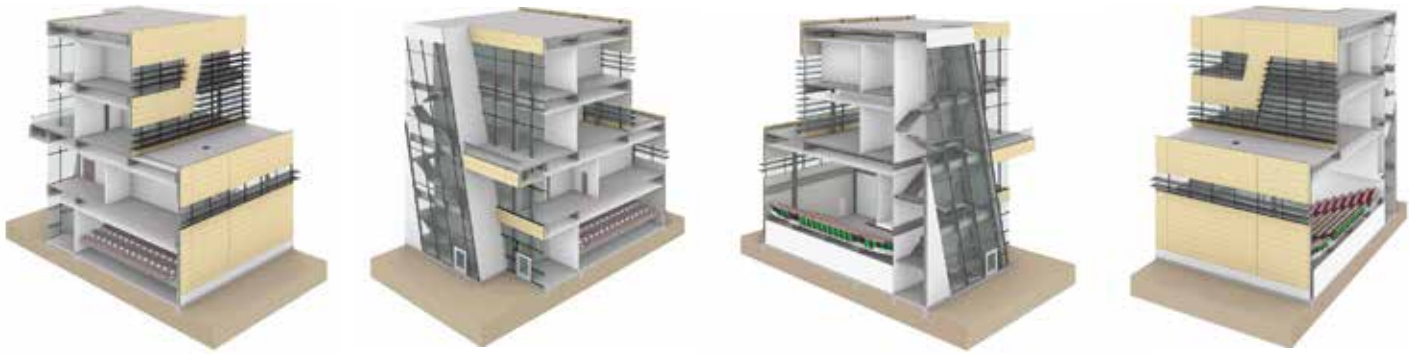
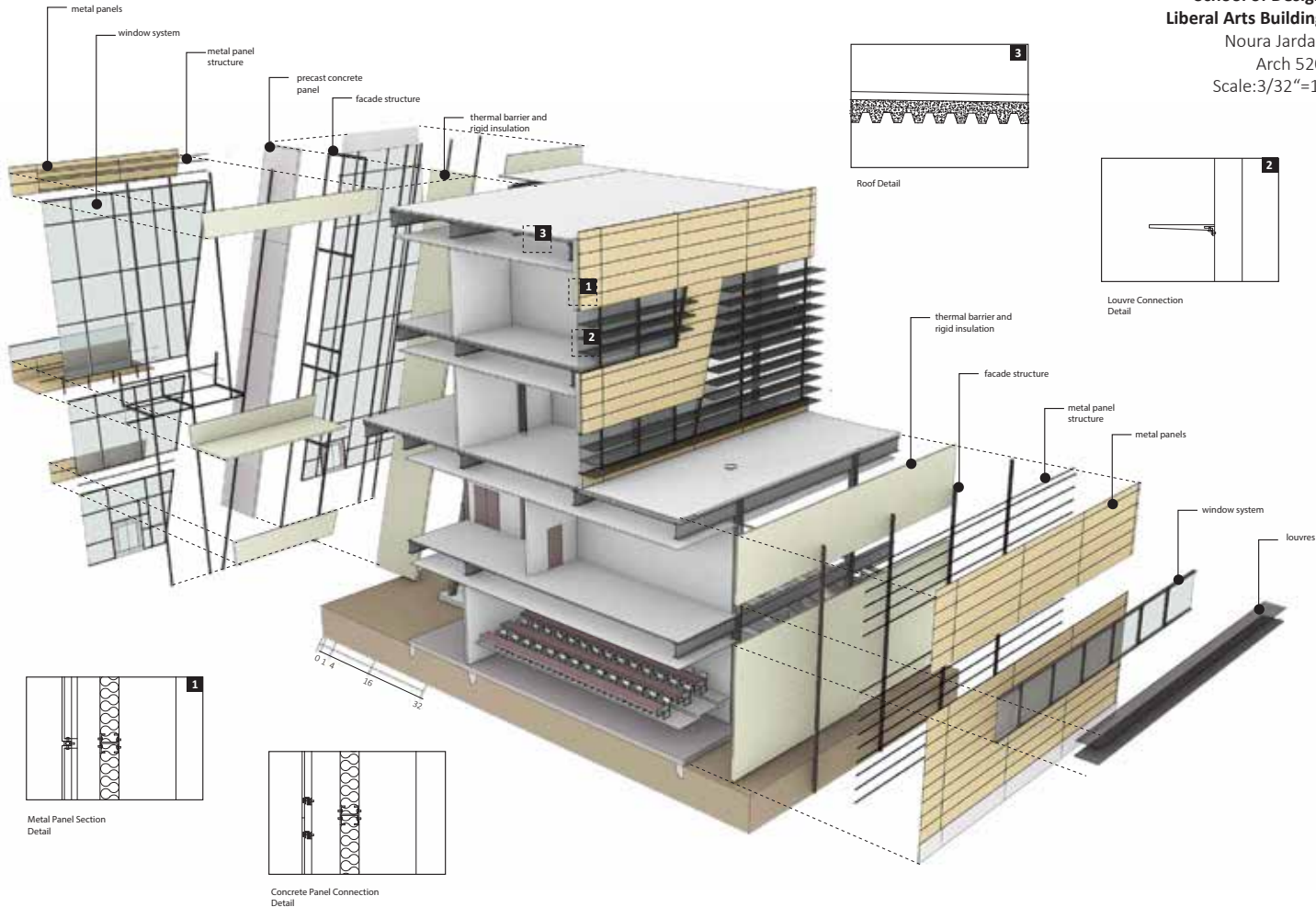


DANAI METOYER | ARCH 520

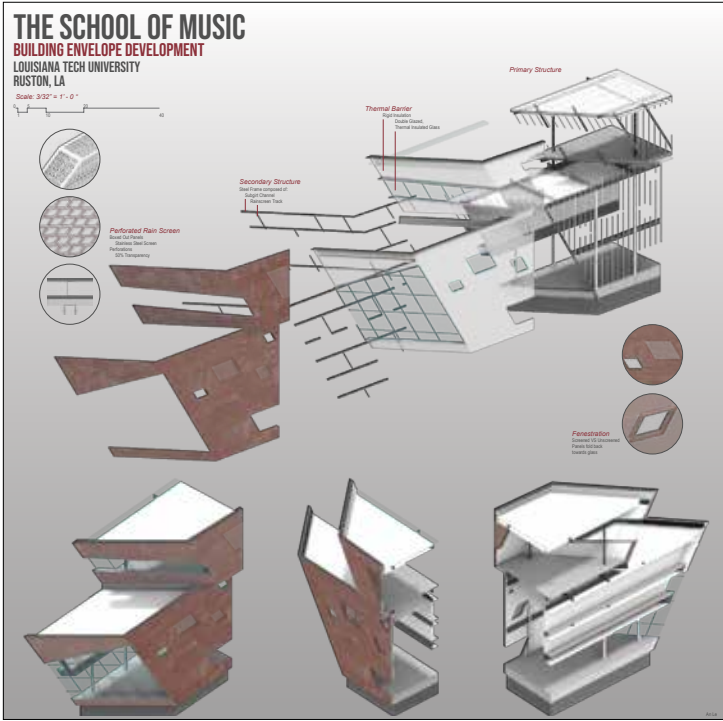
Danai Metoyer, 2022

Building Envelope Development

School of Design
 Liberal Arts Building
 Noura Jardali
 Arch 520
 Scale: 3/32"=1'



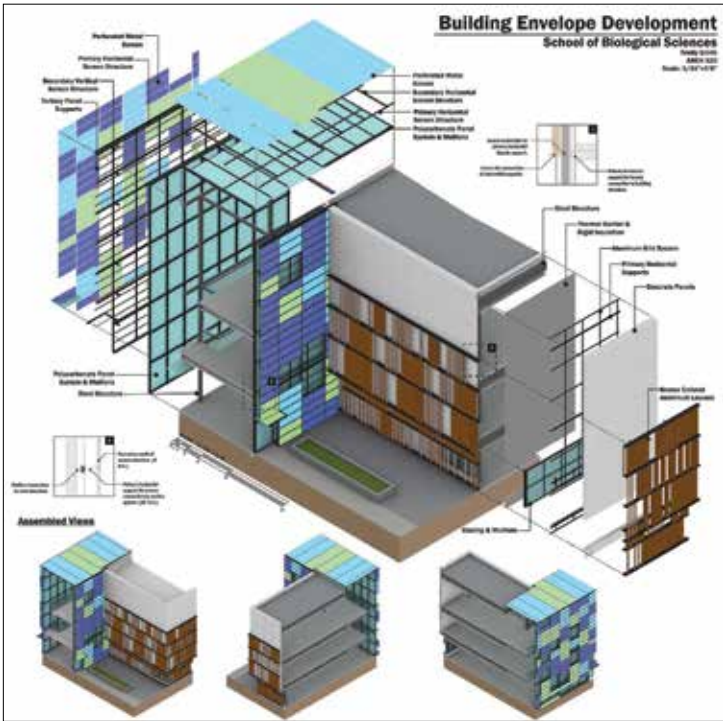
Noura Jardali, 2022



An Le, 2020



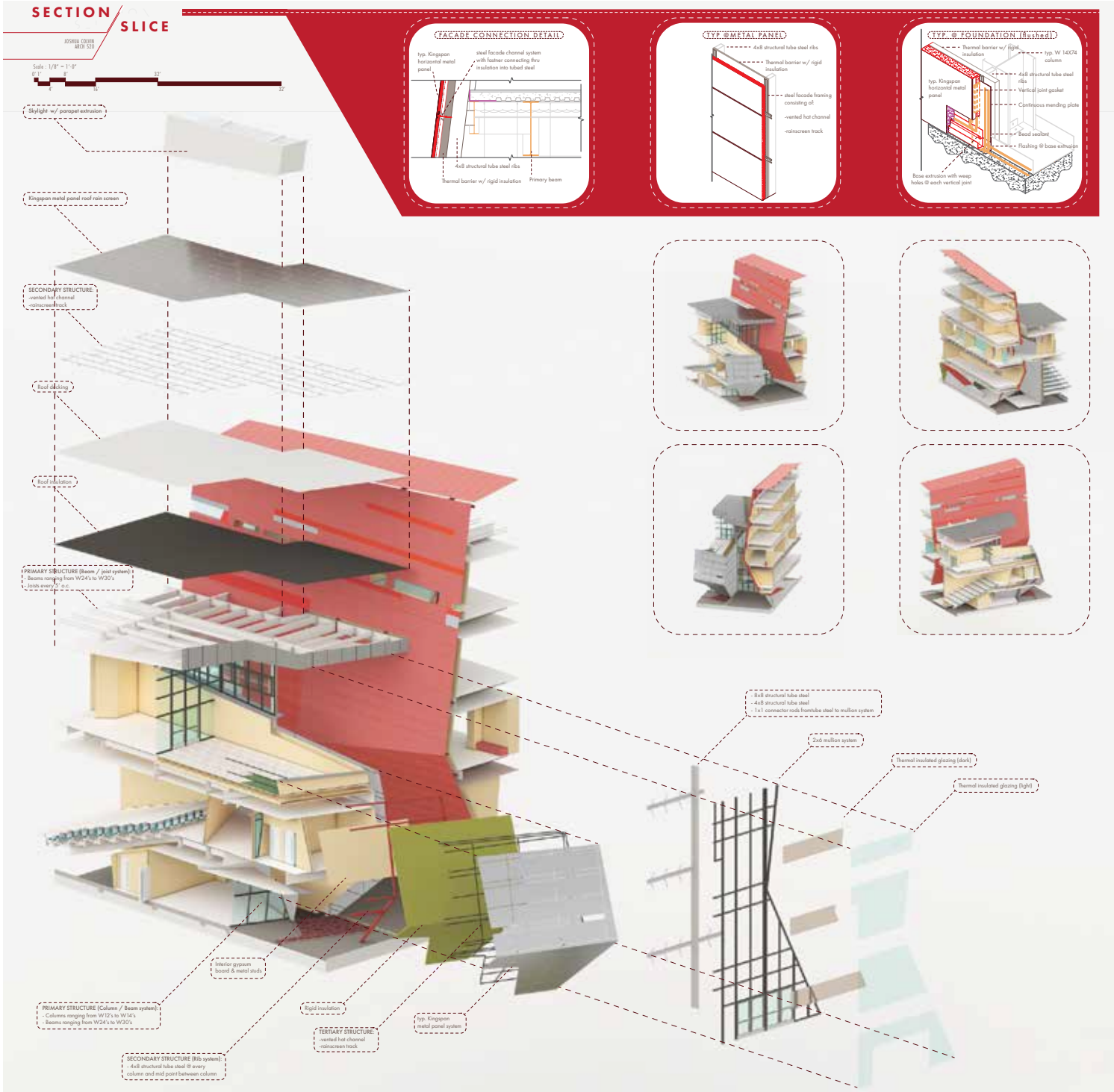
Clark Malchow, 2022



Trinity Smith, 2021



Wesley Cagle, 2021



Joshua Colvin, 2022



3

MEDIA CLASSROOM

COMMUNICATION DEPARTMENT HEAD OFFICE

COPY / MAIL

COMMUNICATION DEPARTMENT GATHERING

MEDIA STORAGE

MEDIA CLASSROOM

UNIFORM CLOSET

WOMEN'S RESTROOM

MEN'S RESTROOM

SEMINAR CLASSROOM

SEMINAR CLASSROOM

FACULTY OFFICE

FACULTY OFFICE

STORAGE

DH

LARGE CLASSROOM

FACULTY OFFICE

FACULTY OFFICE

FACULTY OFFICE

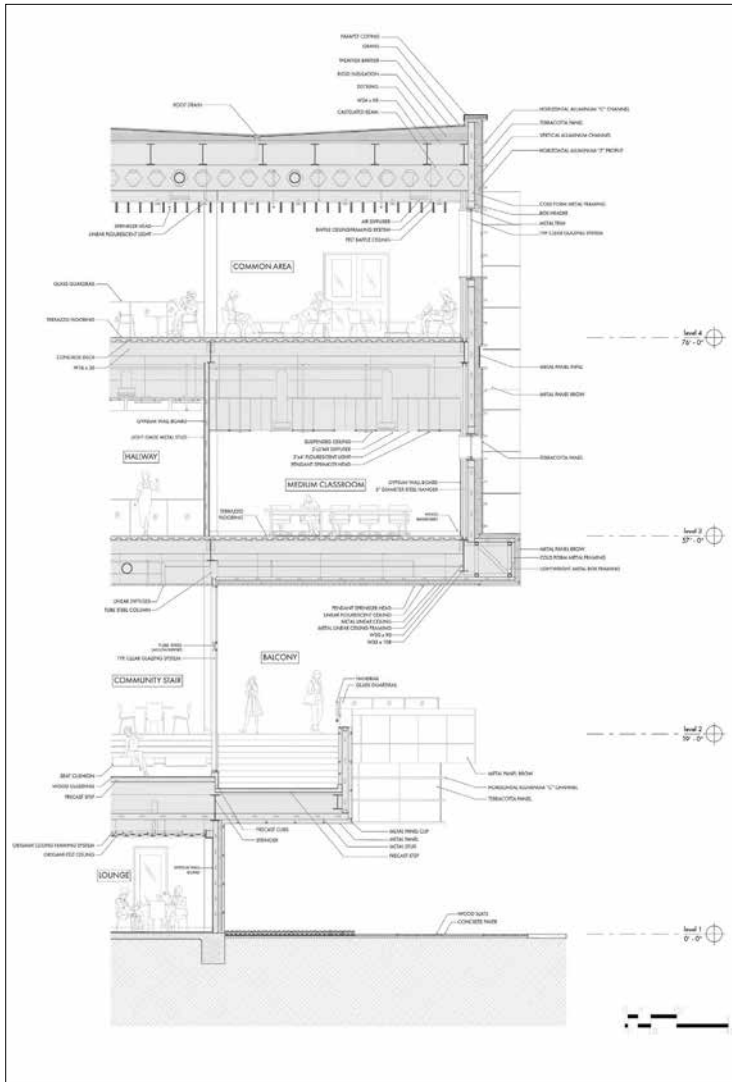
FACULTY OFFICE

HOTEL OFFICE

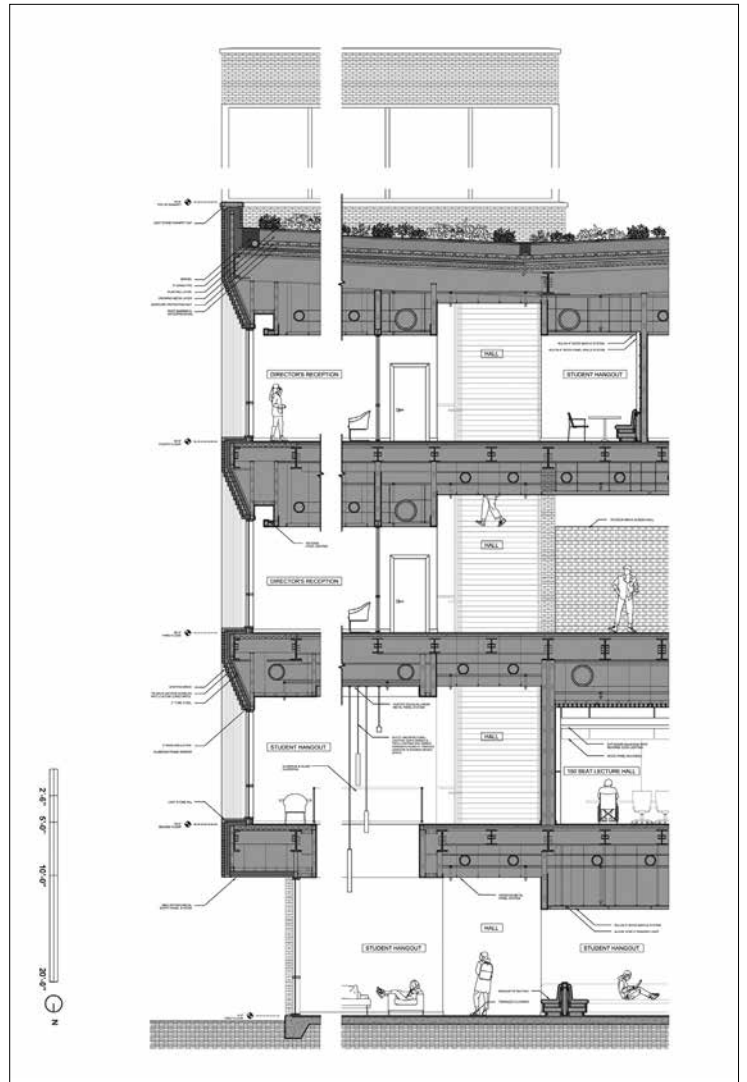
SECTION 3

WALL SECTIONS

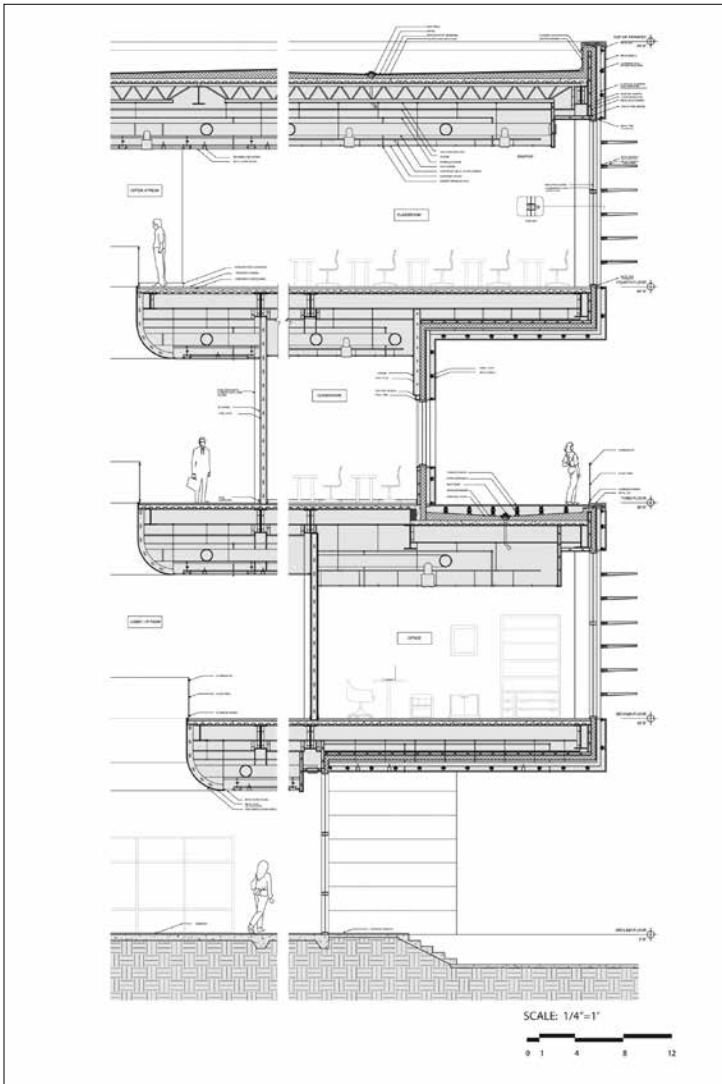
In this phase, students develop several large-scale ($3/4"=1'-0"$) wall sections through significant portions of their design's spatial and building envelope. The goal is to examine and articulate the material, connective, structural, and haptic natures of the building internally and externally. At this scale, new systems of lighting, HVAC, and fire suppression can be integrated with the developing detail of structure and envelope assemblies to produce an immersive understanding of their buildings' construction.



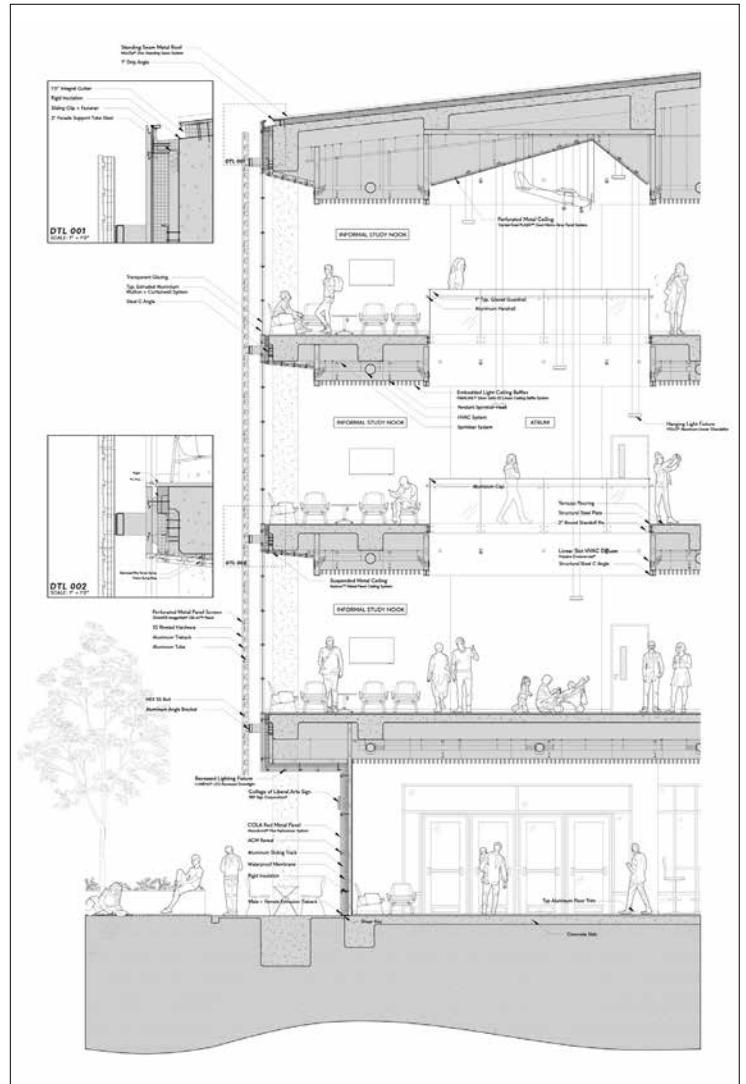
Cedric Digba Katchia, 2022



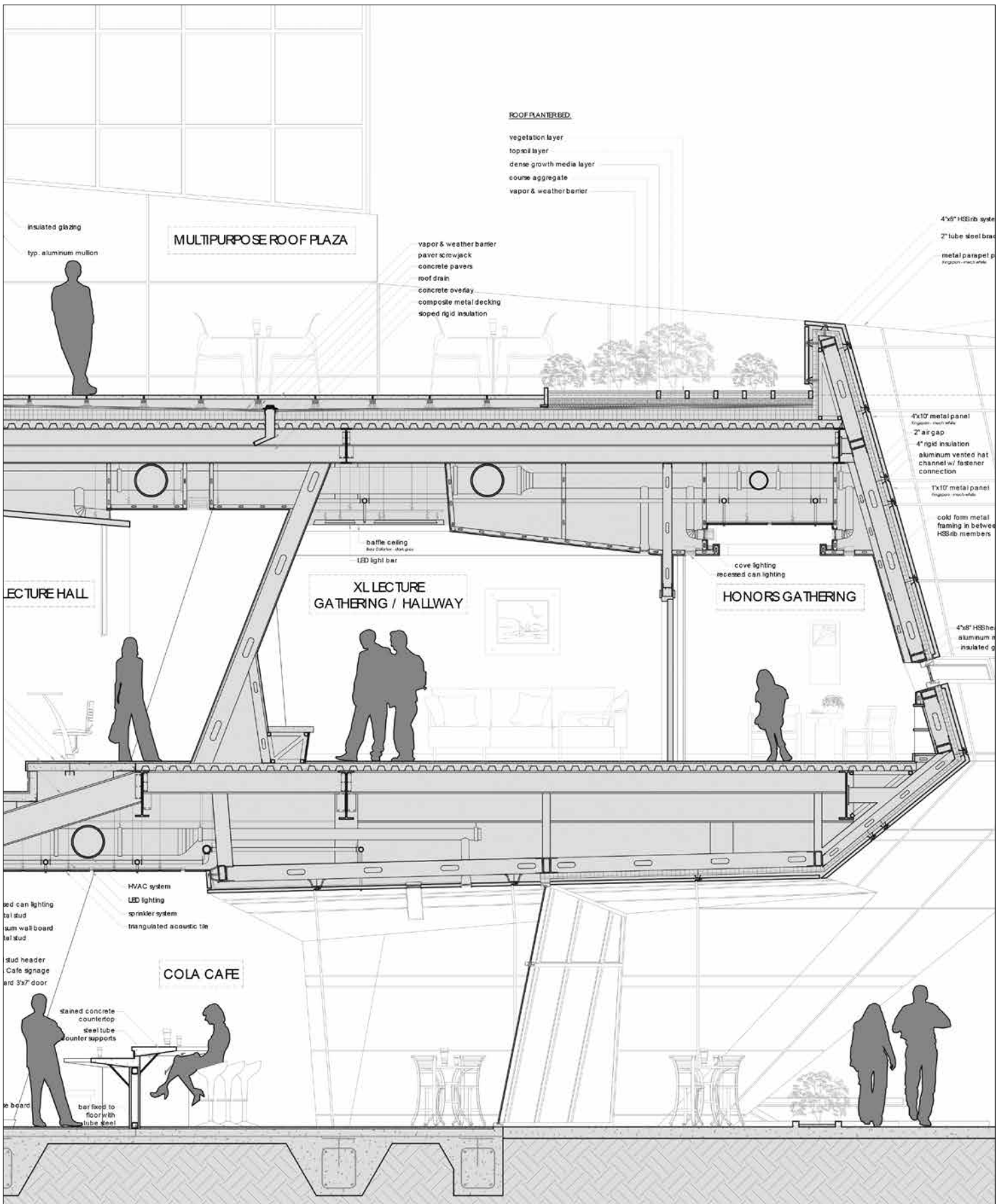
Erin Eubanks, 2022



Noura Jardali, 2022



Clark Malchow, 2022





SECTION 4

FINAL WORK

When complete, the final presentations of the projects are exhibited. This includes detailed drawings at the level of design development, a variety of renderings and technical diagrams, and extended animated walkthroughs of the completed designs. Shown here is a selection of projects which communicate the depth of developed designs, and the variety of solutions achieved by channeling students' individual architectural interests through the lens of integrative assembly.



Scan the QR code to see animated walkthroughs on YouTube.



Center for Liberal Arts, main campus view,
Cedric Digba Katchia, 2022





Center for Liberal Arts, interior with community stair,
Cedric Digba Katchia, 2022







Center for Liberal Arts, west facade,
Clark Malchow, 2022



Center for Liberal Arts, main interior atrium,
Clark Malchow, 2022





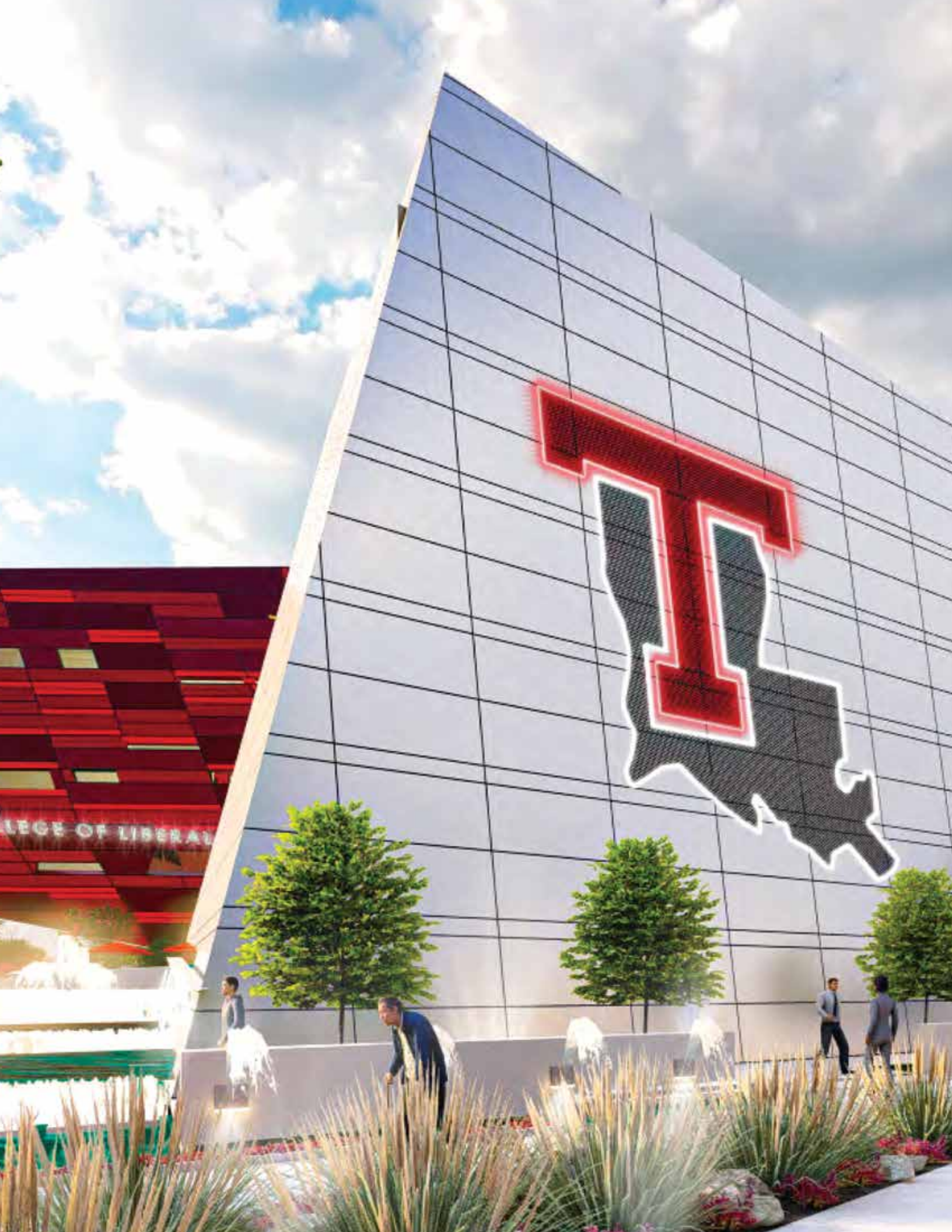


Center for Liberal Arts, main corner showing internal stair,
Danai Metoyer, 2022



Center for Liberal Arts, west façade with landscape and entry, Katelyn Reynolds, 2022





Ideas, imagination, and design poetics can be maintained by – in fact strengthened by – a robust engagement with integrative design assemblies.

The selection of work shown hopefully communicates a general sense of this; the intricate and developed investigation of assemblies becoming manifest in the final representations. By establishing a pedagogy where beauty is holistic instead of skin-deep, understanding the reality of building envelope and structural technology becomes a virtue, a useful tool that enhances architectural intricacy. Technical knowledge regains its importance as process, allowing the conceptual to be made real.

When students embrace the opportunities inherent in the process, the work blossoms. The result has been a notable increase in the technical understanding of the students graduating with our professional degree. By integrating consultancy into the educational design process, the program has built a stronger connection to the practice of architecture, and the important role that consultants play in the development and realization of real-world architectural projects.

Thanks to Robby Vogel, Tom Futrell, and Dr. Pasquale DePaola, who have aided in the creation of this publication.



SCHOOL OF DESIGN
LOUISIANA TECH UNIVERSITY

 design.latech.edu

 [latechsod](https://www.instagram.com/latechsod)



LAFAYETTE

**University-Community Partnerships,
An Adaptive Reuse Strategy**

Credits

ARCH 501 ASSISTANT PROFESSOR	Ashlie Latiolais
ARCH 501 ADJUNCT FACULTY	Phanat Xanamane
INTERIM DIRECTOR	Kari Smith
COPY EDITOR	Susan Cook
DESIGNER	Trista McCord

**LOUISIANA STATE BOARD OF
ARCHITECTURAL EXAMINERS**

**MARY "TEENY" SIMMONS ARCHITECTURE
EDUCATION and RESEARCH FUND**

"University Community Partnerships, an
Adaptive ReUse Strategy"

Advanced Architectural Design I

ARCH 501

The course précis challenged students to investigate how architects can foster and realize community-based visions of equitable development and climate-responsive design. Throughout the term, students collaborated with diverse stakeholder constituents in an inclusive and empathetic pursuit to achieve experiential, relevant, and beautiful design propositions.

Design propositions sought to upgrade and expand an existing SNAP-approved, for-profit food retail market - Da Berry Fresh Market. Da Berry Fresh Market is the culmination of Envision da Berry's (EdB), a not-for-profit organization in New Iberia, Louisiana, long-term community-based visioning process. Fraught with economic disjunction in architectural and master planning investment, the disparities of this area in the past decade have led to a devastating deterioration of the neighborhood's urban fabric and loss of collective memory of the place. A once-thriving commercial and cultural hub, prior to desegregation, the working-class area has been torn apart by crime, addiction, violence, and poverty.

In response, four themes emerged as strategies and approaches:

Health + Wellness

Urban Fabric

Agriculture

Social Concerns

Urban Greenhouse Beacon /
Agriculture

New Iberia, Louisiana

This project focused on creating a series of beacons to distinguish a thriving communal place through materiality, programming a rooftop community greenhouse, and vertical architectural forms while providing a glowing presence in the neighborhood at night.

Ethan Domingue

Lafayette, Louisiana



Social Concerns

New Iberia, Louisiana

Community bonding through building was the core of reacting to social concerns researched within the West End. This project maintains constant grounds-keeping activities framed by architectural interventions.

Carla Ortega

Tovar, Venezuela





Health + Wellness

New Iberia, Louisiana

Through a series of conversations and interviews with local community patrons, this project seeks to capture the heart of mental health issues in the West End. The architectural interventions here are focused on encouraging interaction between community members while simultaneously breaking the barriers of stigma and empowering 'self' to promote a healthier lifestyle.

David Allen

Opelousas, Louisiana



Urban Fabric

New Iberia, Louisiana

Through a rigorous investigation of the existing context, this project introduces fragmentations of the West End intertwined with water return systems to activate socio-economic interest.

Sean Siravo

New Roads, Louisiana

ARCH 501 *STUDENTS*

David Allen
Chloe Barton
John Bowman
Ethan Domingue
Kristen Eddy
Randy Gallow
Crawford Gossen
Mark Jones
Kimberly LaBrousse
Kevin Levy
Ian Naquin
Carla Ortega
Molly Pipes
Abby Pitre
Kimberly Rusk
Cole Sheehan
Sean Siravo
Matthew Smith



School of Architecture and Design

Fletcher Hall Art Gallery

Fletcher Hall, Room 205

/ulsoad



The image features a complex background of overlapping, semi-transparent wireframe cubes and rectangular prisms, creating a 3D architectural or digital space. The lines are thin and light gray, with some dashed lines indicating hidden edges. The overall color palette is light gray and white.

LSU

VIRTUAL FRICTIONS

LSU

School of Architecture

COLLEGE OF ART & DESIGN
School of Architecture

LOUISIANA STATE UNIVERSITY
136 Atkinson Hall
Baton Rouge, LA 70803
O 225.578.6885
F 225.578.2168

<https://design.lsu.edu/architecture>

Virtual Frictions

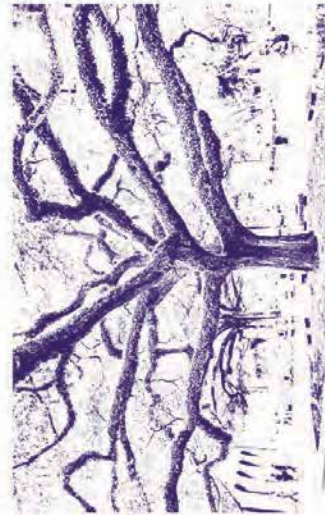
Louisiana State University
School of Architecture

FEB 13 FEB 14 FEB 15

OPEN TO PUBLIC
KICK-OFF LECTURE
BRANDON CLIFFORD

7 WORKSHOPS

OPEN TO PUBLIC
ROUND TABLE &
RECEPTION



Louisiana State Board of Architectural Examiners Report

Table of Contents

Section 1: Overview

Section 2: Crop Circles

Section 3: Zip Form

Section 4: Reflate

Section 5: Constructing Textiles

Section 6: Inter-Dimensional Narratives

Section 7: Robotic “Augmented” Vision

Section 8: Gravity Assisted Casting

Virtual Frictions Overview

The All-School workshop was entitled Virtual Friction, and it was the last collective in-person activity the School of Architecture did before the pandemic forced us to go online in spring 2020.

Virtual Frictions was proposed as a launching point for a series of investigations, exploring the reciprocities between digital craft and physical materials and tools. The workshop included seven visiting academicians specialized in seven different forms of fabrication working with around two hundred B Arch and M Arch students. The students were divided into groups of six to eight students from different year levels.

Over the span of three days, the workshop included a kickoff keynote lecture (Brandon Clifford, of MIT and Matter Design), and day-long sessions of project development and fabrication. The work was exhibited on Friday (Feb 15, 2020) afternoon, in the School of Architecture building (Atkinson Hall) and the College of Art and Design building. The workshop concluded with a panel discussion and a reception to share the results of the workshops.

Virtual Friction created a space in which diverse perspectives, designs, and fabrication methods were shared. These challenged students to adapt their digital designs to and push the limits of the materials and fabrication methods that they were working with. Students were taught new skills, explored new aspects of technologies, and were introduced to making in new and exciting ways. Through this, students developed a deeper understanding of how physical craft interconnects with digital technologies from their experiences.

Following this is the All-School workshop poster, which includes an overview of the event and a description of the seven thematic fabrication workshops, and provides a brief introduction to each workshop and its leader. The section that follows will start with a poster for that specific thematic fabrication workshop, which will include a more detailed description of the workshop and its leader. The poster will be followed by pictures related to that specific workshop. The final section is a breakdown of the LSBAE budget for the All-School workshop.

Please see the announcement of the workshop at <https://design.lsu.edu/?s=VIRTUAL+FRICION>, and the video of the event that was produced which you can view on https://www.youtube.com/watch?v=VacUk_T-rEkY.

Virtual Frictions

Louisiana State University
School of Architecture

FEB 13 FEB 14 FEB 15

OPEN TO PUBLIC
KICK-OFF LECTURE
BRANDON CLIFFORD

OPEN TO PUBLIC
ROUND TABLE &
RECEPTION

7 WORKSHOPS

"Virtual craft still seems like an oxymoron; any fool can tell you that a craftsman needs to touch [their] work. This touch can be indirect—indeed no glassblower lays a hand on molten material—but it must be physical and continual, and it must provide control of whole processes ... more abstract endeavors such as conducting an orchestra or composing elegant software have often been referred to as craft, this has always been in a more distant sense of the world ... Our digital practices seem more akin to traditional handicrafts, where a master continuously coaxes a material."¹

Digital technologies have provided watershed moments for innovation and progress (promised and realized). Innovations in computation have offered exciting new possibilities for the construction, consideration, and design of the built world. Architects tackling this new area of expertise have long grappled with the challenge of reconciling the new languages of scripting, software, and virtual environments with the established traditions of material craft, physical drafting and measure, and tactile response.

At the same time that the discipline has seen digital fabrication shift from niche specialization towards a new status quo, some architects and designers have shifted their investigations from exploring the potentials new computational and fabrication technologies present towards possible reciprocities between computational processes and traditional crafts or insights.

How can digital technologies learn from physical craft? This is the sincere and challenging question which Virtual Frictions proposes as a launching point for a series of investigations exploring the reciprocities between digital craft and physical materials and tools. Seven invited workshop instructors will lead investigations into timely questions in digital fabrication. Through their work, students will learn new skills, explore new aspects of technologies, and be introduced to making in new and exciting ways. The three-day event will be kicked-off with a lecture by Brandon Clifford, of MIT and Matter Design, and will culminate in a round-table and reception to share the results of the workshops.

¹ McCullough, Malcolm. *Abstracting Craft: the Practiced Digital Hand*. Cambridge (Massachusetts): MIT Press, 1998.

Organized by:
Niloufar Emami, Zachary Angles, and Soo Jeong Jo
sarch@lsu.edu

[CROP CIRCLES]

analog algorithms

Brandon Clifford

Massachusetts Institute of Technology

Mystery and speculation surround the nocturnal creations of geometries in the landscape: Crop Circles. As cryptic as their creation stories are, the geometries that describe them are universally rule-based. Students will begin by establishing their rule-based geometries at the desk, then translate them into a computation method that constructs a code to deploy a drawing at a geological scale.

[ZIP FORM]

digital curved forms

Emily Baker

University of Arkansas

The mathematical concept of parallel transport will be physicalized as students design and create curving steel forms that "zip" together from flat parts. Students will digitally model unique forms using a provided parametric strategy. Simple analog jigs will enable the fabrication of these complex forms at large scale. This workshop aims to reveal how analog fabrication techniques paired with computational design strategies can make fabrication of complex geometries easy, efficient, and fun.

[REFLATE]

digitally designing inflatables

Jonathan Desi-Olive

Kansas State University

In teams, workshop participants will design and build their own inflatable environments under a very simple premise: the structures must be made of HDPE plastic sheeting and must fit within a volume of 5m x 5m x 5m with the whole team inside. Upon completion, the "village" of inflatable pavilion-like structures will be exhibited across the LSU campus.

[CONSTRUCTING TEXTILES]

parametric knit forms

Shelby Doyle

Iowa State University

In groups of five to six people, students will design and construct textile installations that explore the friction between digital simulations of textiles and their physical construction. This will include modeling proposals in Kangaroo Physics for Grasshopper then fabricating large peg looms, knitting panels, and installing the knits to reflect the initial design proposal.

Funding provided by:

The LSBAE Mary "Teeny" Simmons Architectural Education and Research Fund

The LSU Center for Collaborative Knowledge

The LSU College of Art & Design



[INTER-DIMENSIONAL NARRATIVES]

VR designed 3D forms

Olga Mesa

Roger Williams University

In pairs, students will respond to prompts to construct a spatial inter-dimensional narrative within a virtual environment. They will examine the frictions and reciprocities inherent in traveling between physical and digital space, and the spatial perception and physical sensations triggered by visual stimuli. Participants are encouraged to test the connection between the body and its movements to measure, model, and control phenomena. A portion of their scenes will be translated into 3D printed objects that embody their spatial constructs and appeal to our imagination.

[ROBOTIC "AUGMENTED" VISION]

robotically captured AR videos

Ebrahim Poustinchi

Kent State University

RAV investigates a possible medium to establish a workflow between a custom-made AR application and a curated robotic motion. Enhanced through the lens of the existing contemporary discourse about representation, students use RAV workflow to develop a hybrid actual/virtual video, that is half digital and half physical. As an outcome of the workshop, students will develop a robotic videography path for the UR5 robot arm to capture a curated video of the AR scene.

[GRAVITY-ASSISTED CASTING]

variable parametric casting molds

Lavender Tessmer

Massachusetts Institute of Technology

The workshop will focus on casting as a scalable form of production, examining the trade-offs between geometric complexity, variation, and timing. Projects will investigate a "gravity-assisted" casting technique, using multiple possible orientations of a partially filled casting mold to generate different geometric permutations. Each team will produce a mold that is capable of producing more than one geometry using gravity-assisted variation—a casting "machine" for producing an array of unique geometries. Using digital modeling to maximize the potential of geometric relationships in the mold design, students will explore the interior and exterior mold geometries along with different volumes of casting material and number of separate material deposits.

LSU | Louisiana State University





THOMAS W. ATKINSON HALL

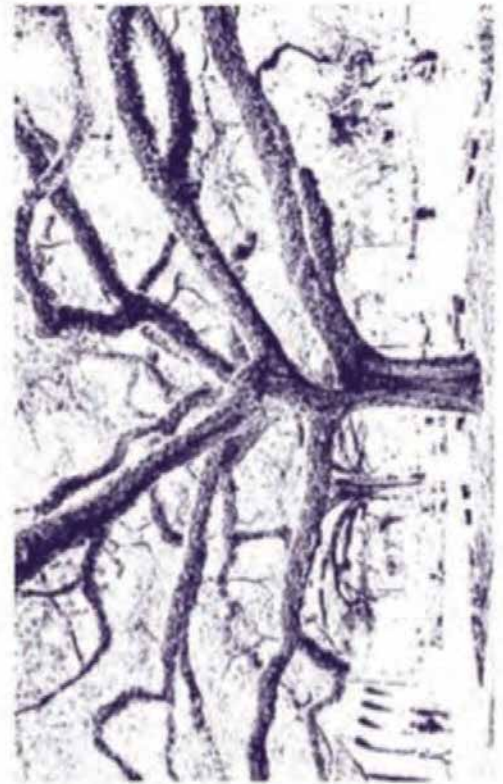


Virtual Frictions

[CROP CIRCLES]

analog algorithms

TAUGHT BY: Brandon Clifford,
Massachusetts Institute of Technology



FEB 13th-15th

ROOMS

INSTRUCTION: ATKINSON 142
PRODUCTION: PARADE
GROUND
DISPLAY: ATKINSON
HALLWAYS

Workshop Description

Mystery and speculation surround the nocturnal creations of geometries in the landscape—Crop Circles. As cryptic as their creation stories are, the geometries that describe them are universally rule-based. Curiously, these same rules transcend millennia – from the stone circles of northern Europe, to the Nazca Lines of South America, or the Mound-builders of the Ohio and Mississippi valleys. The term crop-circle was first coined in the 1980's during a boom that was coincidental with the introduction of GPS, laser measurements, lidar, and other advanced survey equipment. In turn, transforming

the intimate relationship between string and survey methods from a utilitarian knowledge to an artistic endeavor that has cultivated curiosity ever since. What could we learn today from the exercise of dramatically scaling up a set of rules to draw on the earth? The digital era has promised a reciprocity between drawing and making. This workshop tackles the question of how to transcend size by establishing relational geometric operations that can operate beyond the scale of a human to draw on the earth. Students will begin by establishing their rule-based geometries at the desk, translate that into a computation method that constructs a code to deploy a drawing at a geological scale. Students will also design and fabricate the drawing/survey tools that will implement their drawing code. Upon completion, a drone will photograph the creation from above, verifying their blind



obedience to the generative rules.

Brandon Clifford is an Assistant Professor at the Massachusetts Institute of Technology and Principal at Matter Design. Brandon received his Master of Architecture from Princeton University in 2011 and his Bachelor of Science in Architecture from the Georgia Tech in 2006. From 2006-2009 he worked as project manager at Office dA (NADAAA) in both Boston and New York.

LSU | Louisiana State University

LSU

School of Architecture

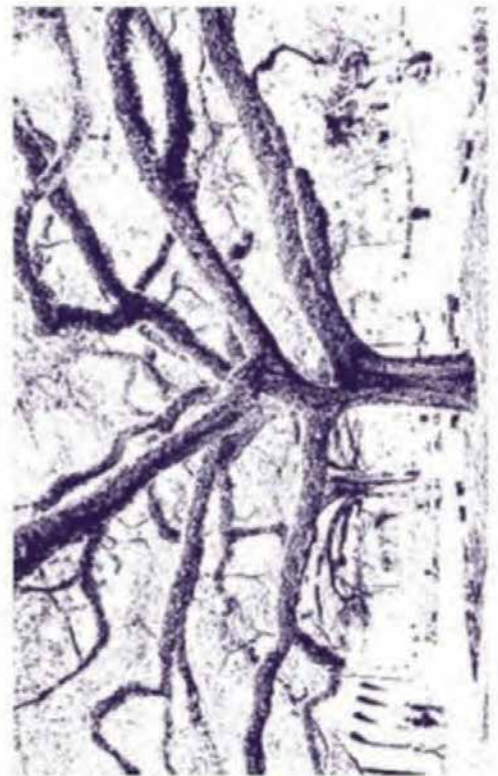


Virtual Frictions

[ZIP FORM]

digital curved forms

TAUGHT BY: Emily Baker,
University of Arkansas



FEB 13th-15th

ROOMS

INSTRUCTION: DAY 1:
ATKINSON 43
DAYS 2 + 3: STUDIO ARTS 134
PRODUCTION: CNC SHOP
DISPLAY: SCULPTURE
GARDEN

Workshop Description

The mathematical concept of parallel transport will be physicalized as students design and create curving steel forms that “zip” together from flat parts. Students will digitally model unique forms using a provided parametric strategy. Simple analog jigs will enable the fabrication of these complex forms at large scale. This workshop aims to reveal how analog fabrication techniques paired with computational design strategies can make fabrication of complex geometries easy, efficient, and fun. It can operate

beyond the scale of a human to draw on the earth. Students will begin by establishing their rule-based geometries at the desk, translate that into a computation method that constructs a code to deploy a drawing at a geological scale. Students will also design and fabricate the drawing/survey tools that will implement their drawing code. Upon completion, a drone will photograph the creation from above, verifying their blind obedience to the generative rules.

Emily Baker is an assistant professor at the University of Arkansas. She is an architect and educator whose full-scale constructed experimentation informs her creative work and teaching. Experience on job sites in architectural practice catalyzed her search for novel structural and construction systems,



and her work, employing both digital and analog design and fabrication techniques, seeks to discover new aesthetic territory embedded in the way architecture is conceived and constructed. She previously taught at Tulane University. She received a Master of Architecture from Cranbrook Academy of Art and a Bachelor of Architecture from University of Arkansas. ARDEN



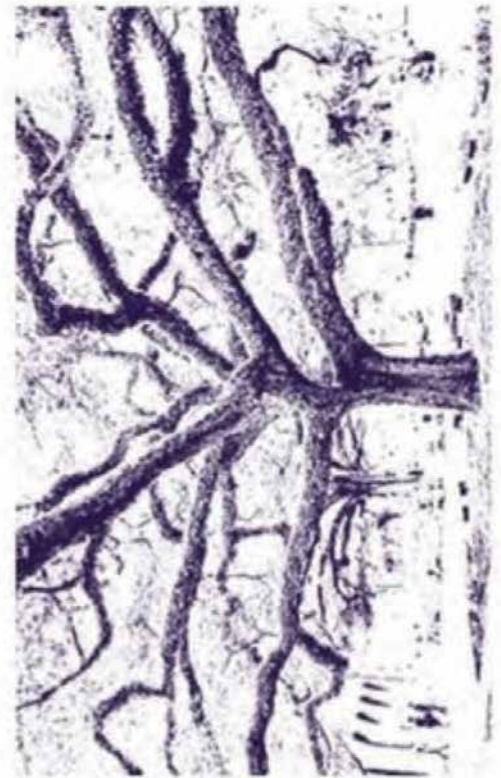


Virtual Frictions

[REFLATE]

digitally designing inflatables

TAUGHT BY: Jonathan Desi-Olive,
Kansas State University



FEB 13th-15th

ROOMS

INSTRUCTION: STUDIO ARTS
BUILDING ROOM 101

PRODUCTION: STUDIO ARTS
BUILDING ROOM 101

DISPLAY: SCULPTURE
GARDEN

Workshop Description

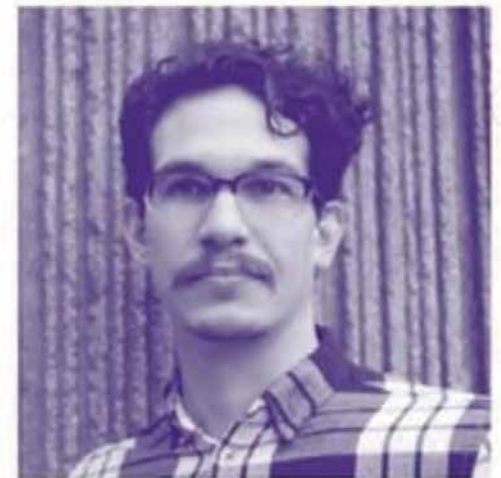
In teams, workshop participants will design and build their own inflatable environments under a very simple premise: the structures must be made of HDPE plastic sheeting and must fit within a volume of 5m x 5m x 5m with the whole team inside. Upon completion, the "village" of inflatable pavilion-like structures will be exhibited across the LSU campus.

Jonathan Dessi-Olive joined the Department of Architecture at Kansas State University in 2019 as an Assistant Professor,

teaching design studios, advanced structural systems, and construction seminars. Prior to joining KState, he was the inaugural Ventulett NEXT Fellow at the Georgia Institute of Technology School of Architecture. He was born in Minneapolis, Minnesota.

Jonathan received a Master of Science in Design and Computation (SMARCHS) from the Massachusetts Institute of Technology, a professional Master of Architecture from The University of Pennsylvania, and a B.S. in Architecture from the University of Minnesota. His work takes a critical approach to technology while integrating the history and theory of Architecture, contemporary construction, and computational design.

Jonathan's motivation is to help designers and builders



learn to design more intuitively, systematically, and visually. He firmly believes making is inseparable from design and his research efforts have focused on developing design and construction tactics for high-performance, sustainable building technologies



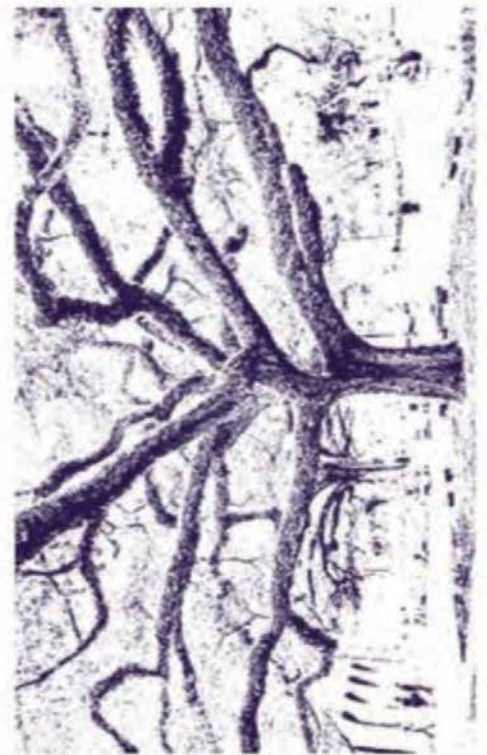


Virtual Frictions

[CONSTRUCTING TEXTILES]

parametric knit forms

TAUGHT BY: Shelby Doyle,
Iowa State University



FEB 13th-15th

ROOMS

INSTRUCTION: ATKINSON 107

PRODUCTION: ATKINSON 107

DISPLAY: ATKINSON 107

Workshop Description

In groups of five to six people, students will design and construct textile installations that explore the friction between digital simulations of textiles and their physical construction. This will include modeling proposals in Kangaroo Physics for Grasshopper then fabricating large peg looms, knitting panels, and installing the knits to reflect the initial design proposal.

Shelby Elizabeth Doyle, AIA is an Assistant Professor of Architecture at the Iowa State University College of Design and co-founder of the ISU Computation & Construction Lab (CCL). The CCL is the result of

Doyle's ISU Presidential Impact Hire to rethink digital fabrication and design-build. The CCL works to connect developments in computation to the challenges of construction: through teaching, research, and outreach.

The central hypothesis of CCL is that computation in architecture is a material, pedagogical, and social project; computation is both informed by and productive of architectural cultures. This hypothesis is explored, through the fabrication of built projects and materialized in computational practices. The CCL is invested in questioning the role of education and pedagogy in replicating existing technological inequities, and in pursuing the potential for technology in architecture as a space of and for gender equity. Doyle received a Fulbright Fellowship to Cambodia, a

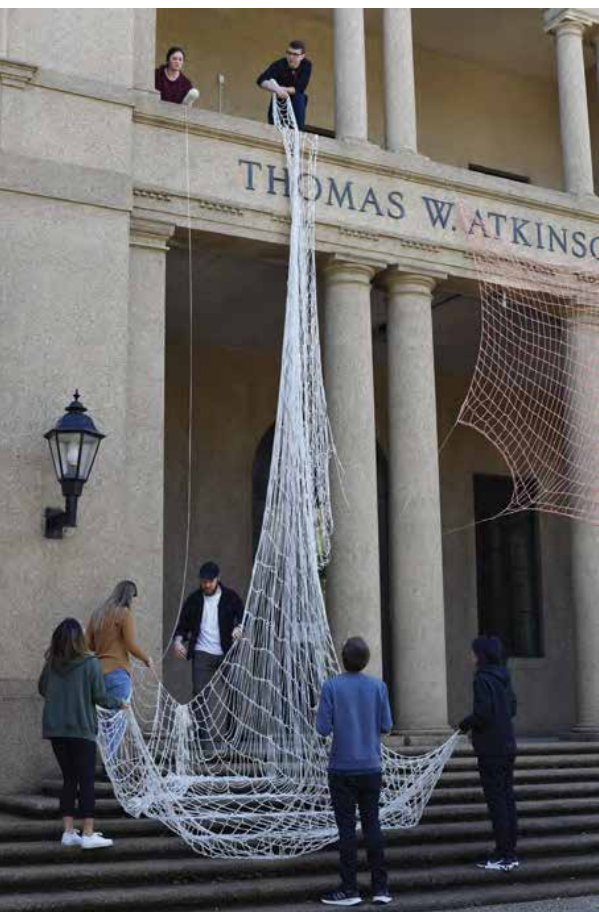
LSU | Louisiana State University



Master of Architecture from the Harvard Graduate School of Design, and a Bachelor of Science in architecture from the University of Virginia.

LSU

School of Architecture



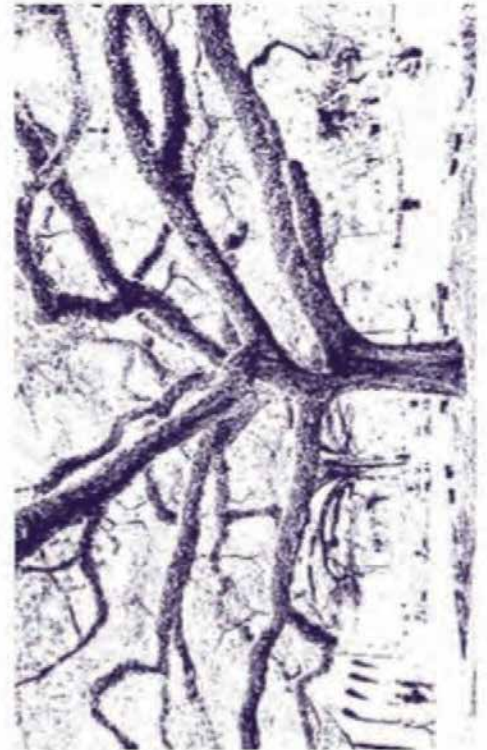


Virtual Frictions

[INTER-DIMENSIONAL NARRATIVES]

VR designed 3D forms

TAUGHT BY: Olga Mesa,
Roger Williams University



FEB 13th-15th

ROOMS

INSTRUCTION: CXC +
COMMONS
PRODUCTION: VIZLAB
DISPLAY: ATKINSON HALLWAY

Workshop Description

In pairs, students will respond to prompts to construct a spatial inter-dimensional narrative within a virtual environment. They will examine the frictions and reciprocities inherent in traveling between physical and digital space, and the spatial perception and physical sensations triggered by visual stimuli. Participants are encouraged to test the connection between the body and its movements to measure, model, and control phenomena. A portion of their scenes will be translated into 3D printed objects that embody their spatial constructs and appeal to our

imagination.

Olga is an architectural designer, researcher and educator. She is an Assistant Professor at Roger Williams University, where she teaches design studios and digital representation and fabrication courses at undergraduate and graduate levels in the department of Architecture. She is interested in the accord between form, forces and performance and how this interaction has a physical manifestation in material systems. Her primary research involves the investigation how formal orders result from processes and contextual forces and how, with the inclusion of cultural forces, architectural form can be developed in an analogous manner to respond to a given context. In her field, Olga is particularly interested in biologically inspired design. Prior to joining RWU, Olga was

LSU | Louisiana State University



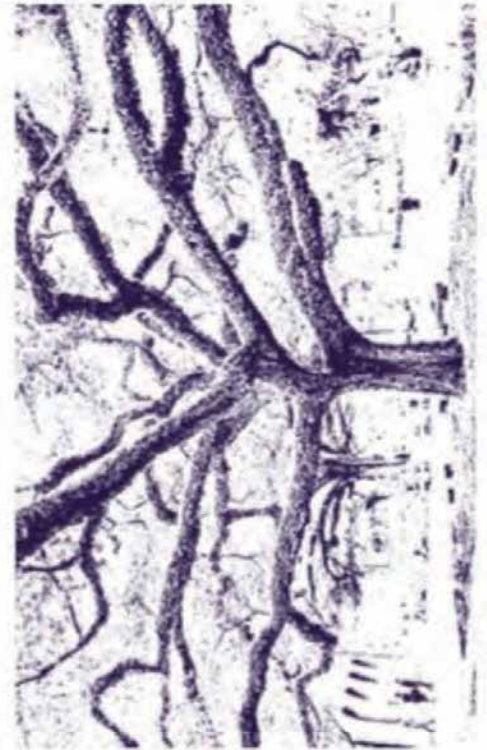
a research associate at Harvard MaP+S Lab (Material Processes and Systems Lab) and was part of the Alive research group working in collaboration with the Wyss Institute for biologically inspired engineering. She continues to collaborate with both groups on a consulting basis.

LSU

School of Architecture



Virtual Frictions



[ROBOTIC "AUGMENTED" VISION]

robotically captured AR videos

TAUGHT BY: Ebrahim Poustinchi,
Kent State University

FEB 13th-15th

ROOMS

INSTRUCTION: C-LAB

PRODUCTION: C-LAB

DISPLAY: ATKINSON HALLWAY

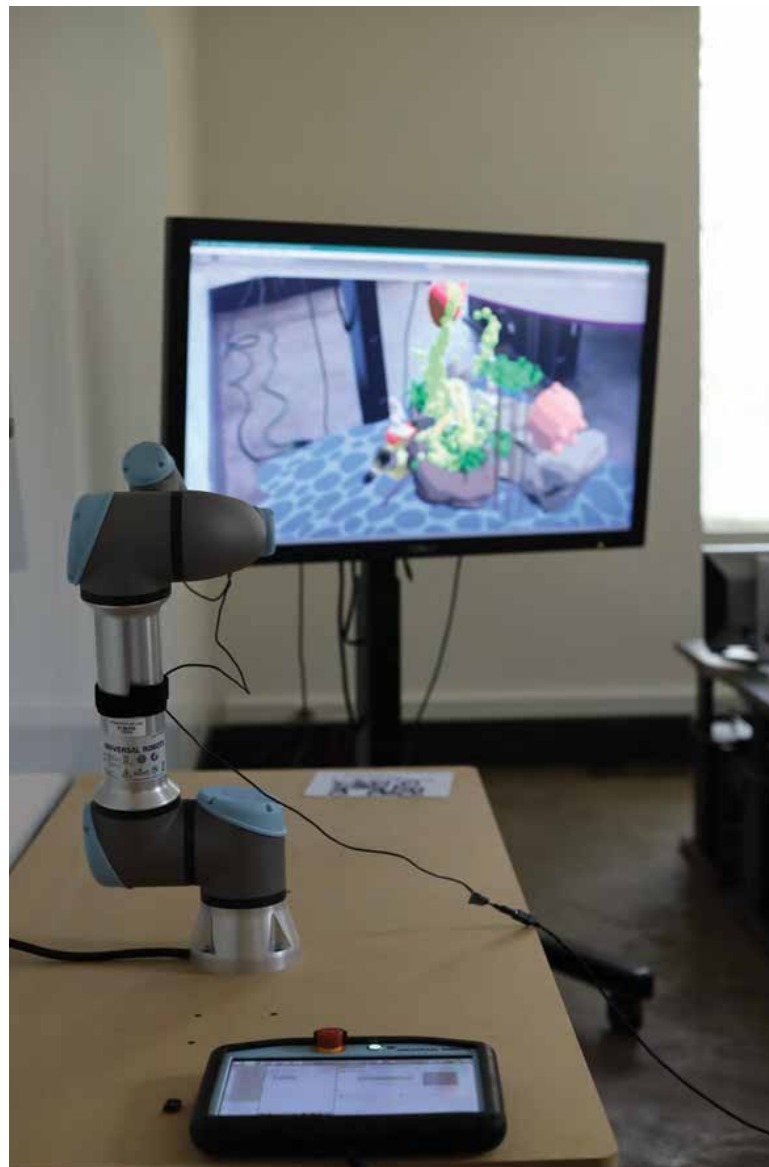
Workshop Description

RAV investigates a possible medium to establish a workflow between a custom-made AR application and a curated robotic motion. Enhanced through the lens of the existing contemporary discourse about representation, students use RAV workflow to develop a hybrid actual/virtual video, that is half digital and half physical. As an outcome of the workshop, students will develop a robotic videography path for the UR5 robot arm to capture a curated video of the AR scene.

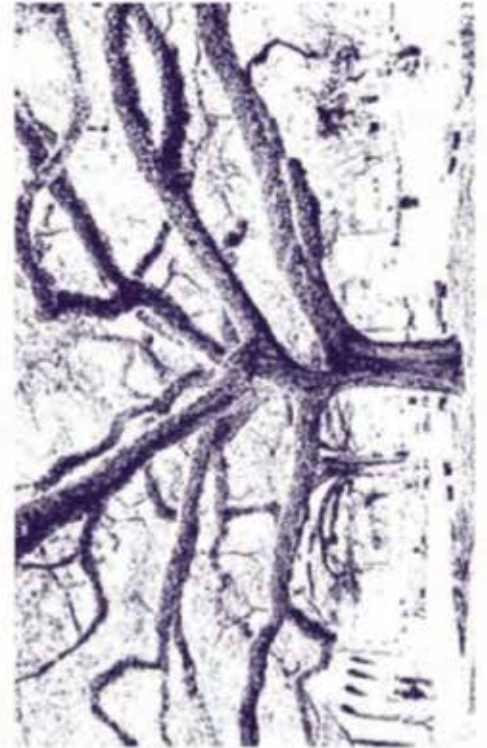
Ebrahim Poustinchi is an Assistant Professor of Digital Design at the College of Architecture and Environmental

Design at the Kent State University. As a designer and researcher, Ebrahim is interested in expanding the horizons of architecture as a cultural practice, by applying cutting-edge technologies and incorporating insights from other academic disciplines. The use of robotic technology as a design tool helps Ebrahim to express ideas and explore new sides of architecture, which he regards as a "thinking medium." Ebrahim's areas of research include interaction-based form making, sustainable geometries, digital fabrication, and new media.





Virtual Frictions



[GRAVITY-ASSISTED CASTING]

variable parametric casting molds

TAUGHT BY: Lavender Tessmer,
Massachusetts Institute of Technology

FEB 13th-15th

ROOMS

INSTRUCTION: ATKINSON 53
PRODUCTION: ATKINSON 53
DISPLAY: SCULPTURE GARDEN

Workshop Description

The workshop will focus on casting as a scalable form of production, examining the trade-offs between geometric complexity, variation, and timing. Projects will investigate a "gravity-assisted" casting technique, using multiple possible orientations of a partially filled casting mold to generate different geometric permutations. Each team will produce a mold that is capable of producing more than one geometry using gravity-assisted variation—a casting "machine" for producing an array of unique geometries. Using digital modeling to maximize

the potential of geometric relationships in the mold design, students will explore the interior and exterior mold geometries along with different volumes of casting material and number of separate material deposits.

Lavender Tessmer is a PhD student in Design and Computation at Massachusetts Institute of Technology. Her work explores the disciplinary boundary between Art and Architecture as well as the relevance of craft in digital modes of design. She received her Master of Architecture from Washington University in St. Louis in 2011, where she taught as a lecturer from 2012-2017.





LOUISIANA STATE BOARD OF ARCHITECTURAL EXAMINERS
9625 Fenway Ave., Ste. B Baton Rouge, LA 70809
(225) 925-4802 | www.LSBAE.com | BD@lsbae.com