2014
SGH / Dri-Design Scholarship

Fall 2014
ARCH 410 ‘integrate’ design studio
University of Nebraska-Lincoln
College of Architecture
The mission for the Architecture program is to provide the educational foundation for articulate, intellectually aware, self-realizing architecture professionals capable of performing effectively in evolving design disciplines.
Arch 410 Architectural Design: Tectonics
Fundamentals of architectural design. Continuation of problems concerned with human needs. Intermediate projects that emphasize technological considerations as form determinants. Structure, material, equipment, and construction.

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The College of Architecture at the University of Nebraska-Lincoln, in partnership with SGH Inc. and Dri-Design, has established a student scholarship competition for the fourth-year, undergraduate, architectural design studios. The scholarship recognizes student projects exemplifying outstanding design investigation, resolution, and significance. This opportunity brings together aspiring architects and industry leaders to advance disciplinary knowledge of design, materiality, and innovation.

Following the end-of-semester review, one project from each studio will be selected to compete for the SGH Inc./Dri-Design Scholarship. These projects will be presented to judges who are all established practitioners in their fields. A finalist will be chosen for producing and communicating a comprehensive architectural project that is a result of design decisions at different scales. To be successful, students need to demonstrate a high degree of professional dedication, rigor, open-mindedness, and resourcefulness. Projects are expected to be rigorously thorough and to clearly communicate the breadth and depth of investigation.

We thank our sponsors SGH, Inc., a leading distributor and installer of customized building products, and Dri-Design, a producer of advanced and sophisticated metal wall panel systems.
SGH, ARCHITECTURAL PRODUCTS

SGH, Inc. is a leading distributor and installer of customized building products primarily used for the exterior of commercial buildings. Unlike other providers, SGH, Inc. supplies only the highest quality products and expert installation services. From the initial idea to the final details, SGH, Inc. has the resources to successfully execute projects of any size from concept to completion.

Since we also source the materials we install, our employees have an intricate knowledge of how the products work, the best way to install them and pass that expertise on to our customers. Our professional team works closely with owners, architects and contractors to ensure that the product looks stunning both on paper and in use.

We would especially like to thank Troy Burkey for helping establish this program and for his great stories.
DRI-DESIGN
Founded in Holland, Michigan in 1995, under the leadership of President Brad Zeeff, dri-design has turned the Metal Panel Industry on its ear. With dri-design, Zeeff set out to solve what he viewed as the significant shortfalls of traditional metal panel systems: delamination, staining due to the effects of weather on joints and gaskets, a lack of color and texture options, the rising cost of production and inefficient installation practices.

The result of dri-design’s meticulous engineering, is a 100% recyclable, pressure equalized rain-screen, architectural metal wall panel system that attaches to nearly any substrate without the use of clips or extrusions. The pressure equalized rain-screen design can be installed simply over commercial grade Tyvek onto plywood, or as the most sophisticated outboard insulation pressure equalized rain-screen you can design.

We would especially like to thank Jason Zeeff for partnering with SGH and delivering a great lecture in Lincoln, NE.
John Dwyer is the founder and principal of John Dwyer Architect. He is a licensed architect and member of the American Institute of Architects. He began his career as a carpenter, working for his father, and after years of apprenticeship, attended the University of Minnesota College of Architecture and Landscape Architecture. He received his Masters of Architecture in 1999 and completed his internship with SALA Architects in Minnesota and CVDB Arquitectos in Lisbon, Portugal.

In 2004, John founded his first private practice. Among his early works was the first LEED Platinum home in the state and one of the first in the nation. In 2005, he began teaching as a lecturer and adjunct professor at the University of Minnesota College of Design.

In 2007, after Hurricane Katrina, John moved to New Orleans and founded a community design studio in the Lower 9th Ward. In the first 6 months, he provided pro bono design services to over 60 returning households. In 2009, he returned home to pursue new design ideas within the changing economy. Among them was a single family home which came to be known as “the house for the new economy” as well as one of the winning entries in a national competition for affordable, sustainable multifamily housing. In 2010, he developed and founded John Dwyer Architect with a higher level of client service, a greater attention to detail and a stronger focus on beautiful, high performance buildings.
MATT KREILICH

As design principal and partner of Snow Kreilich Architects, Matthew Kreilich is the heart of the firm’s collaborative working model taking an active role in both strategic and detail design resolutions in the studio. His passion lies in the belief that in addition to solving complex and pragmatic needs of a client’s program, design has the transformative power to enhance our everyday life experiences. Matthew provides design leadership and insight into all of the firm’s projects, as well as acting as the project designer on some of the studios’ most significant projects.

Matthew’s design leadership and experience continue to be recognized both locally and nationally. Matt was recently honored with the AIA National Young Architect Award for outstanding design leadership and locally recognized with the Minneapolis/St. Paul’s Business Journal’s 40 under 40. His work has received numerous Awards including MN AIA Honor Awards, the National AIA Honor Award, Progressive Architecture Award and the Holcim Award. Matthew was also the recipient of the prestigious Ralph Rapson Traveling Study Fellowship.

MARC SWACKHAMER

Associate Professor of Architecture at the University of Minnesota where he serves as the Director of the M.Arch Program. Marc is also a cofounding principal (with Blair Satterfield) of the award-winning and internationally published architecture and design collaborative HouMinn Practice. HouMinn’s work has been published and exhibited internationally and their prototype research won national awards from ID Magazine and Architect Magazine. In his research, Swackhamer studies the relationship between performance and ornament through the lenses of digital production and fabrication technologies. Marc has also developed significant research in the area of biomimetics and its relationship to design. He is currently co-authoring a book on innovations in mimetics with Blaine Brownell. Swackhamer was a chair of the 2008 National ACADIA (Assoc. for Computer Aided Design in Architecture) Conference and now serves on ACADIA’s Board of Directors. As an Associate Member of the University of Minnesota’s Digital Design Consortium he conducts research in the area of digitally produced modular wall systems. Through this effort, he and Blair Satterfield have collaborated with numerous faculty members and researchers from multiple disciplines across the university. He received degrees from the University of Cincinnati and Rice University.
PRE-DELIBERATION
DELIBERATION
Honor Award

Architecturing Archicultures

Zoe Cope, Kate Horn
Faculty Mentor: Joyce Raybuck

The Kansas City Art Institute College of Architecture is not just a school of Architecture, but also a school of thought on Architecture. This project opens a dialogue about the past, present, and future of our profession as it is allied to the academic pursuit of an Architecture.

Sustainable strategy massing was done early in order to capitalize upon natural conditions provided by the site. These strategies helped inform the conceptual strategies of program adjacencies and journey. This project as a whole represents the journey from process to product both through the building itself and through the curriculum that inhabits it. The overall design was formulated through attention to materiality, detail, and experiential condition. Seven key moments that demonstrated this best were represented through careful renderings, facade studies, and technical detailing. Documentation of the entire building moves from technical plans, which represent the bones of the building into fully detailed building sections that maintain a level of abstraction and finally rendered building elevations. Each drawing set adds another layer of information to the previous in the same way that moments color and fade with time to layer our memories.
KANSAS CITY ART INSTITUTE

college of architecture
kansas city, mo
Zoë Cope + Katie Horn
Sacred Architecture: searching for the ineffable

Melissa Hywood, Michelle McCullough  
Faculty Mentor: Mark Bacon

Architecture is a sensorial interaction that provides us with a perceptual and integrated understanding in the world. Buildings, to be more specific, are experienced as a full extension of our bodies. The Material Logics + Sacred studio searched to understand the connection between the multi-sensory experience and the crafting of a building. The search relied on confluent investigations of material logic and sacred architecture.

Traditionally, the cathedral has stood as a physical manifestation of Catholic values and ideology. The church has existed as a private, introspective, and non-public space; much like the common perception of Catholic culture. Recently, Catholicism has made significant shifts, taking an inclusive approach in their principles. While the religion has progressed, its architecture has yet to align to these new ideals. This sacred space challenges religious architecture’s hold on tradition.

The massing and material strategies translate current Catholic ideology into formal experience. The massing of the building is developed off of the strict perpendicular axes and morphed into a space that centers on community integration. The centralized courtyard and programmatic ramp space provide an invitation to the broader community and guide their experience into the spaces of light. Through the use of materials, the user follows the progression of Catholic culture from the monolithic, traditional stone entrance, up the ramp into the perforated Ipe transitional space, and into the light of the acid-etched glass sanctuary. The sanctity of communal experience is emphasized throughout the church as a symbol of progression rather than historical representation.
This sacred space challenges religious architecture’s hold on tradition.

MATERIAL STRATEGY

Monolithic Volumes
Envelope volumes in dark slate to reference traditional monolithic churches

Highlight Destinations
Create light volumes at heightened points of destination with acid-etched glass that sweeps light along chapel axis to the balcony

Warm Core Spaces
Warm the mid-core space and create a visual transition from the heavy stone to the light in these places of procession.

Highlight Nooks
Define nooks with goosenecking. Glaze the North and South sides to allow natural light while connecting views to the West.

Section Study
Each community core is highlighted in blue.
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**MASSING STRATEGY**

**Intersect**
Both axes are perpendicular to one another and intersect at the center. Worship axes aligned to traditional East and West.

**Rotate**
Shift worship off of its traditional axis in order to be more welcoming by providing easier access and better flow.

**Separate**
Prayer chapel is elevated to establish an experiential procession. The community building is pulled away from the main chapel to allow circulation within the point of intersection.

**Widen & Punch Out**
A space is hollowed into the corner of each building, allowing community to be an integral part of program.

**Heighten**
The termination of each axis is heightened to designate key points.

**Pop Up**
Revels are clarified within the community space to allow natural light in, control views, and make interior more.
Finalist

Lied Education Center for the Arts

Trevin Eckhardt
Faculty mentor: Nate Krug

The Lied Education Center for the Arts (LECA) of Creighton University in Omaha, Nebraska opened its doors in 1996 to combine the areas of Fine and Performing Arts under one roof. From that day, the Arts program has struggled with lack of storage space, small classrooms, inadequate performance spaces, etc. The need for expansion becomes needed for the continuance of a proper educational space. The idea behind Phase II of LECA is to create a new addition that becomes a main focal and gathering point for the arts college as well as the Creighton as a whole. Student interactions, student spaces and events became a major factors in the design. These were considered to develop Phase II into an interaction hub for the campus.

LECA Phase II is a 120,000 square foot addition where a 950 seat music hall is the main feature designed to accommodate music performance of all types. The three story addition also features a lecture hall, café, offices, classrooms, practice rooms, and student resource centers. The new spaces create a design based on the uses and interaction of the students of the college. The additional space will allow the college to grow and expand to better accommodate the students and their education. The new facility will bring a new set of programs into use for the college. Bringing this large array of programmatic elements together develops LECA Phase II into a user-based design, mainly focused on the students.
Air Rights Architecture investigates the use of the available air space above buildings, challenging preconceived notions that architecture must primarily touch the ground. The use of air space allows for the densification of urban areas as well as providing space for auxiliary programs to function and sustain the areas around them. Air rights and the sale of space above buildings is becoming a highly explored area of architecture around the United States.

This proposal is located in downtown Lincoln, Nebraska, near the heart of the commercial business district, above the historic Grand Manse. The project site is surrounded by four of the most highly trafficked roadways in Lincoln making the site highly visible to the public. The project site is positioned between many new developments such as the Pinnacle Bank Arena, Haymarket expansions and the P Street District as well as established Lincoln landmarks such as the University of Nebraska Lincoln, Memorial Stadium and the State Capital Building.

The population of Lincoln is projected to nearly double over the next thirty years, this makes a project that focuses on the densification of the city’s downtown a desirable solution. This proposal looks to make contextually conscious use of valuable air right’s property above the Grand Manse with a design that will accommodate the needs of a growing urban density, while providing unique architectural attributes that will excite and engage the public. Like many other cities, Lincoln has the opportunity to take advantage of air space and densify using air rights architecture.
Air Rights Architecture investigates the use of the available air space above buildings, challenging preconceived notions that architecture must primarily touch the ground. The use of air space allows for the densification of urban areas as well as providing space for auxiliary programs to function and sustain the areas around them. Air rights and the sale of space above buildings is becoming a highly explored area of architecture around the country.

Our project is located in downtown Lincoln, Nebraska, near the heart of the commercial business district, above the historic Grand Manse. The project site is surrounded by four of the most highly trafficked roadways in Lincoln making the site highly visible to the public. Over the course of the past few years, Lincoln’s downtown has been developed with new districts and landmarks. The project site is positioned between many of these newest developments such as the Pinnacle Bank Arena, Haymarket and the P Street District as well as established Lincoln landmarks such as the University of Nebraska Lincoln, Memorial Stadium and the State Capitol.

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The entrance to the public program of the building.

Adding a popular business program such as this will draw in public users. It will share an similar atmosphere with the adjacent eatery.

Corner lounge for tenants of the East side of this level.

Type A Studio units in this location.

Providing energy efficient strategies to the building’s performative.

Lounge space for tenants of the East side for this level.

Type A Studio units in this location.

Corner lounge for tenants of the East side of this level.

Type A Studio units in this location.

Corner lounge for tenants of the East side of this level.

Double height amenity gym for private users. Situated in public location on cantilever, equipped with views of city and capitol.

Double height lounge space for tenants on the third side of this level.

Double height lounge space for tenants on the third side of this level.

Abundant square footage and expansive views provided in these units.

Free access to general public.

Typical units which celebrate the structure by exposing it within the unit. Two ADA accessible units in this location.

Typical units which celebrate the structure by exposing it within the unit.

Typical units which celebrate the structure by exposing it within the unit.

Washers and dryers for all tenants are located on this level.

In addition to providing accessible outdoor space to the public, the patio doubles as outside eating for customers of the eatery.
1. Creates Balconies and Solar Protection
2. Creates Aesthetic Solar Shading by filtering...
Jason Zeeff from Dri-Design presenting logics of systematic assembly.
EFFICIENT MANUFACTURING

3i-Design panels are made quickly with highly automated equipment...saving energy costs.

QUICK INSTALL

3i-Design wall panels install fast which helps save energy as well.

NO PLASTICS

3i-Design single skin technology does not have a plastic core...saving fossil fuel.

NO VOCs

3i-Design paint providers are environmentally-conscious finishers. They use a 100% air capture system and destroy the VOCs with a regenerative thermal oxidizer, so there is no adverse environmental impact.
Troy Burkey from SGH presenting material and spatial properties.
DESIGN STUDIOS

Mark Bacon
Adjunct Professor of Architecture

Sean Coffey
Kekeli Dawes
Alex Hill
*Melissa Hywood
Jacob Jambor
Zebulun Lund
*Michelle McCullough
Garrett Peterson
Rachel Plamann
Rex Sandquist
Rebecca Walker
Junxing Wu
Wei Xia
Yunsen Zhong

* Studio Finalist

David Karle
Assistant Professor of Architecture

Travis Barrett
*Kevin Bukowski
Meredith Butler
Alexander Eastman
Mackenzie Gibbens
Ethan Griger
Meghan Janousek
Hillary Krajnik
Nathan Moulds
Nolan Schaefer
*Elizabeth Szatko
Caitlin Tangeman
Salem Topalovic
Leul Yoseph
Nate Krug
Associate Professor of Architecture

Danielle Blume
John Coughlin
*Trevin Eckhardt
RodRick Ekwall
Anna O'Neill
Kelsey Peatrowsky
Carolina Preciado
Michael Seager
Steven Severson
Corey Thiele
Xiaoyu Wu

Joyce Raybuck
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Maria Bataller Hormeno
Philip Claghorn
*Zoe Cope
Allison Feijfar
Kaitlin Frankforter
Elizabeth Heldridge
*Kathryn Horn
Madeline Horner,
Matthew Kreutzer
Bryan Perez
Ryan Plager
Soeren Tanke
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