Spring 2017 Course Description:

ARCH 573 Graduate Design Studio
Studio Instructor: Prof. Scott Murray
Structural Consultant: Prof. Marci S. Uihlein

Architecture as Inhabited Bridge
Project: a new museum/bridge for Indianapolis

ARCH 573 Course Catalog Description
Design studio investigations of buildings and systems focusing on structure, enclosure, technology and performance. Integration of building materials, components and systems and their impact on the design, construction, and sustainability of buildings. 6 credit hours.
Prerequisite: Graduate standing in Architecture.

Studio Challenge
This studio presents a unique challenge: adding a new museum building to the campus of the Indianapolis Museum of Art on a site that spans across an existing canal.

This process will require the designer to rethink the relationship of buildings to the ground and to water, developing a creative response to this unusual site.

Design Approach
Our approach will focus on how two primary architectural elements—structure and envelope—can work together to create unique experiences of space and light in a high-performance public building.

Specifically, we will be designing long-span structural systems which will shape the project and its spaces, providing a link from one side of the canal to the other, integrated with custom enclosure systems that modulate natural light and views.

This studio explores the potential for integrating structural and envelope systems as key conceptual drivers of architectural design, emphasizing both experimentation and analysis/verification.

Learning Objectives and Process
Following initial research and analysis of site, program, and precedents, students in this studio will work on one semester-long design project: a new museum spanning a canal at the Indianapolis Museum of Art. The design process will be based on experimentation with structure, form, and enclosure, developed through iterative design proposals using large-scale detailed physical and digital modeling techniques. Students will be expected to generate, document, and analyze multiple schemes with clear conceptual foundations before arriving at a final proposal for the project. Projects will be presented in multiple media: detailed plans and sections, digital 3D modeling, physical models at a range of scales, and diagrams and details of structure and enclosure systems. In order to enable a high level of depth and detail in the projects and to develop collaboration skills, students will work on this project in teams of two.

The studio will emphasize mastery of technical principles in combination with more intangible qualities such as spatial experience and the creation of unique architectural character, while also integrating comprehensive design principles of accessibility and sustainability. Through a process of questioning the status quo and projecting future possibilities, appropriate and inventive responses to climatic and site conditions will be sought.

ACSA/ACSA Student Design Competition
Students will submit their projects for a national design competition, the 2016-2017 ACSA/AISC Steel Design Competition. See https://www.acsa-arch.org/programs-events/competitions/2016-2017-steel-competition
Images above: examples of student work in this studio from previous semesters by Laura Eckstein and Jienan Zhang, Casey Ozog and John Harmon, Pavel Gomez and Martin Gym, Caitlin Kelleher and Stephanie Denny, Cody Roth and Youngwook Park, Kaitlin Gerson and Nick Frey.

**Faculty**
The studio is taught by Prof. Scott Murray. Prof. Marci Uihlein will serve as structural consultant for the studio. Some students in the studio will simultaneously be taking ARCH 556: Advanced Structural Planning, taught by Prof. Uihlein, although it is not required that students enroll in both courses. All graduate students are welcome to participate.

**Scott Murray**, Studio Instructor.
Scott is an Associate Professor in the School of Architecture and a licensed architect. His professional background includes working in a range of architecture offices on projects from houses to high-rises. He is the author of two books on building-envelope design, *Translucent Building Skins* and *Contemporary Curtain Wall Architecture*. [http://www.arch.illinois.edu/faculty/scott-murray](http://www.arch.illinois.edu/faculty/scott-murray)

**Marci S. Uihlein**, Structural Consultant.
Marci is an Assistant Professor in the School of Architecture and a licensed professional engineer with a graduate degree in architecture. Her professional background includes working at Arup in their San Francisco and Los Angeles offices. She currently serves as President of the Building Technology Educators’ Society (BTES). [http://www.arch.illinois.edu/faculty/marci-s-uihlein-pe](http://www.arch.illinois.edu/faculty/marci-s-uihlein-pe)