HILLIER COLLEGE OF ARCHITECTURE & DESIGN

NJIT New Jersey Institute of Technology

11/03/2022

Spring 2023 - Options Studio Offerings

For Spring 2023, eligible architecture students can select from among the following Options Studio offerings to fulfill the Options studio requirements.

ARCH 463/464 Options

There are three studio choices:

- Precast Concrete Micro Housing Studio: *Gernot Riether*
- Accessories For Dwelling – An Exercise In Placemaking: *Erin Pellegrino* + *Charlie* Firestone
- Ironbound Future - Re-Imagining Newark's Industrial Roots: *Sean Gallagher*

Options Studios Descriptions:

Precast Concrete Micro Housing Studio

ARCH 463 / 464 OPTION STUDIO

New Jersey School of Architecture, Hillier College of Architecture and Design

Gernot Riether

Image credits: *Kashish Dalal, Lucas Konrad-Parisi, Karly Savinon, Ella Martz, Samantha Volpicella, Abduraham* Oudeh

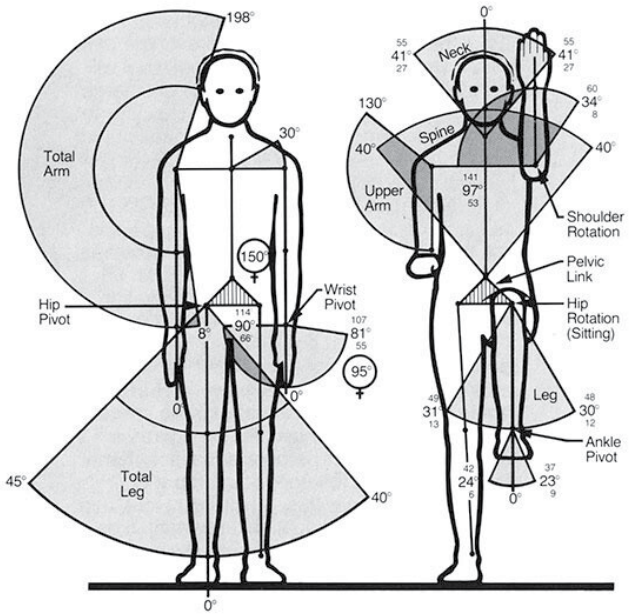
Concrete is one of the world's oldest building materials. Twice as much concrete is used in construction around the world as all other materials put together. The impact of the production and construction with concrete requires immediate action to find low carbon strategies.

Construction material costs are rising, and supply bottlenecks are extending construction time, which makes it nearly impossible to develop affordable housing for investors. At the same time the need for affordable housing types has never been greater. Populations are fluctuating, cost of living is increasing and new typologies for live - work option are needed.

This studio will use the advantages of prefabrication to respond to the crises of **Housing and Equity**. The studio's main challenges will be 1) The development of cost and time effective construction processes to make housing more affordable while including low carbon strategies and 2) The development of a prefabricated façade system which will include **prototyping of façade systems at a precast concrete plant**.

To do that the studio will work closely with the **Precast Concrete Institute (PCI)** and the **Concrete Industry Management (CIM)** Program at the School of Applied Engineering and Technology (SAET) to learn about current practices, identify challenges and speculate with solutions for the precast concrete industry to address climate action.

For any questions about the studio: Gernot Riether (griether@njit.edu)



ACCESSORIES FOR DWELLING

AN EXERCISE IN PLACEMAKING

STUDIO AIMS AND OUTPUT

In Fall of 2021, we embarked on a mission to design and build a prototypical living unit for Newark's "Hope Village" Initiative to provide supportive housing communities for our homeless neighbors. The students in our Fall 2021 studio semester designed and built POD 1 – a detached bedroom unit that was designed to be flexible, quickly deployed, easily demountable, and buildable for a budget of 10K in materials.

Building upon the work of FA2021, we embarked with another studio to design Hope 3, a supportive housing community to house the most at-risk residents of the city. With that work now behind us, we push forward to expand the agency and impact of our design decisions, and look to both design and fabricate elements to support the dwellings produced last semester. This includes, but it not limited to, site elements, sidewalk elements, signage, lighting, interior and exterior furniture, and any object that can help enhance, enrich and engage the lives in and around Hope 3. The goal would be to begin to construct the more human elements of Hope 3, bringing both our design and craft sensibilities together to help make Hope 3 a place for the community and a home for the residents.

Throughout this semester you will be tasked with engaging deeply with the needs of the homeless population that will be served in these communities, the goals of the city and the supportive housing model, as well as the needs of the neighbors and larger Newark community. You will build upon the work already completed, bring a critical eye to it, and bring your fresh ideas and perspective to this important and real-world design problem.

Erin Pellegrino + Charlie Firestone

IRONBOUND FUTURE
RE-IMAGINING NEWARK'S INDUSTRIAL ROOTS

Sean Gallagher | sgallagher@dsrny.com
Diller Scofidio + Renfro: Principal/Director of Sustainable Design
New Jersey Institute of Technology
Hillier College of Architecture and Design

Y Katkhuda, L Coelho Netto, J Huang, J Zhao | "Regenerative Flows"

COURSE OVERVIEW

In 2008, the earth's population became more urban than rural. We are now over a decade into the 'Urban Millennium,' and there is a growing realization that over the next century urban populations will mushroom to densities incomprehensible just a few decades ago. Cities across the world are beginning to re-evaluate the traditional relationships between public, commercial, and industrial zoning to accommodate and sustain an increased demand for social, economical, and environmental services.

In light of this emerging reality, the studio will examine past, present and future strategies of meeting the growing community, industrial, and infrastructural demands of human civilization. The goal is to expose students to emerging post-industrial relationships between people, industry, and ecology that have the potential to define how human urban centers can thrive within social and environmental constraints of this coming century.

To actively engage in this discourse, the studio will use Newark, NJ as a test bed for reimagining new 'public' futures for urban waterfront communities. The Ironbound section of Newark is the type of urban community that will experience the greatest growth by 2050. It's close proximity to the city center, lack of existing density within its zoning boundary, and loss of economic foundation - these areas of cities are ripe for re-imagination. More importantly, the Ironbound is a neighbor of NJIT and Rutgers University Newark Campuses and provides an opportunity to strengthen relationships between university communities and the larger urban community.

The Ironbound's riverfront is a designated area for redevelopment by the city of Newark and has an existing redevelopment plan that can be used as a departure point for student investigations.

NJIT and Rutgers students will partner with Newark's Mayor's Office and Ironbound community groups to address the historical and environmental issues as well as the emerging opportunities within the waterfront community. During the semester the students will also engage with Covanta Waste to Energy plant and the Passaic River-keepers to gain a better understanding of the competing interests of civic services of waste and and the environmental health and the environmental impact to the health and safety of the community.