

## ARC2014: Design Studio 4 – Comprehensive Building Project Winter 2023

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### **CIRCULAR LIBRARY**

*"If it can't be reduced, reused, repaired, rebuilt, refurbished, resold, recycled or composted, then it should be restricted, redesigned or removed from production."  
- Pete Seeger*

#### Overview:

The fourth and last in the sequence of core studios, the Comprehensive Building Project takes on integrated design practices to arrive at advanced building design as inseparable from the design of its site, urban, cultural, and environmental contexts.

The studio takes place in the current context of the climate emergency and is intended to be a framework to reimagine how buildings should be built/unbuilt and programmed for the future given we have a few years left to decarbonize our industry.

It asks the students to rethink the social, material and life-cycle dimensions of buildings to create a net zero Circular Library in Brooklyn.

#### Site:

The project takes place in New York. The city's urban structure, density, culture and endless transformations is the ultimate triumph of capitalism. At the same time, and perhaps as a result, it is a city of extreme climate vulnerability and social inequities. It has been the stage of some of the most spectacular recent global climate events, most notably superstorm Sandy in 2012. Located in the Brooklyn's Gowanus Lowlands neighborhood, the site embodies the magnitude and urgency of the climate threat and is the ground of a rapid transformation away from its industrial past.

#### Program:

The Circular Library is a new public institution enabling the transformation from our disposable waste-producing urban economies into circular models. It will function as a community center for the neighborhood and for people to repair and barter things, share resources and knowledge with the goal to give our material waste a new life.

#### Organization:

While the whole studio will work on the same site, program and deliverables throughout the semester, each instructor will stake a starting point and frame a specific approach for their group. Students will work in pairs for the entire semester.

The course will be informed by the participation and synchronization of the group of co-requisite courses on structure and building science and also a team of outside consultants to form a team-teaching model that allows for and promotes new depths of study and design resolution.

These conversations will inform the negotiations between design intent, internal and external constraints and integrate criteria related to performance and constructability. It will teach working methods to evaluate the design process by quantifying and representing the relatively invisible forces shaping the material dimensions of buildings such as energy use, embodied energy, material supply chains and thermodynamics to deliver a net zero and circular building.