CURRICULUM-BASED PROJECT

ARCH 231: Architectural Design I - Fall 2021



THE HAMER CENTER FOR f COMMUNITY DESIGN Instructor: Aviles, Cooper, Ligler, Morales, Staub

In ARCH 231, a second-year architectural design studio held in the Fall of 2021, students developed ideas for a nature center and kayak rental facility for the Ise of Que in Selinsgrove, Pennsylvania. The buildings were designed to serve as a recreational and educational space for both residents and visitors, welcoming them to Selinsgrove's beautiful surroundings. Students were encouraged to consider how the building interacts with its environment and how architecture can enhance people's experience in nature.

The main architectural challenge was the riverfront site, located within a 100-year flood plain. With climate change increasing the frequency and intensity of flooding events, students learned to design with an ever-changing and dynamic climate rather than against it. Students found design inspiration in the nature surrounding the site as well as Selinsgrove's rich cultural history. Design concepts included the dynamic quality of water, land use over time, and connections between different ecosystems.

Teniola Adebayo: Floating Forms

In the project "Floating Forms" visitors experience water through different phases of density (solid, liquid, and gas).

The Nature Center's timber structure holds a floating "ice cube" in place. The "ice cube" is made of channel glass, creating interesting lighting effects without and within. The structure is suspended over the water, accommodating rising water levels while also providing excellent views of the river.









Jason Neuman: Framing View

The nature center frames views of both the river and the forest, while maintaining a low profile to preserve natural views of the site.

To accommodate flooding, the kayak rack moves with the rise and fall of the water levels. This clever move allows for a design that is functional during any stage of flooding.

Alana Van Grouw: Infinite Nature

"Infinite Nature" fosters a sense of exploration, adventure, and movement by emulating the fluidity and flow of water. The serpentine motion of a kayaker is a key element in the design. When kayaking, the paddle follows the motion of an infinity loop to propel the kayak forward.

The nature center is accessed via an infinity-loop-shaped ramp that gives visitors a panoramic view of the Susquehanna River and the nature that surrounds the site.







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Katherine Morgante: Water Through Time

Inspired by Selinsgrove's history, this nature center highlights how water has been used throughout time. The Susquehanna River has been a vital resource in many different ways. It sustained life for Native Americans, provided transportation during the industrial revolution, and is a recreational space for Selinsgrove today.

The structure begins and ends in the water, encouraging visitors to connect with water in ways people have for many generations. The structure is inspired by a Native American longhouse to evoke the area's history.



Ashley Kirk: Levels of Fluidity

This nature center imagines a flood-resistant space that emulates the Susquehanna River through smooth and elegant forms. Each structure has curvilinear features, such as walls and stairs, in order to emulate the dynamism of a flowing river.

The architectural features are flexible and serve various purposes throughout the year. For instance, the water canal by the gathering space becomes an ice rink during the winter.





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Swaying in Bolero: Jackie Zheng

This nature center is an example of building with nature rather than against it. The design allows residents and visitors to adapt to patterns and anticipated changes in the environment. Disasters only happen when we are ill prepared for natural phenomena.

The floating structure is anchored in the water through bridges, allowing for a steady connection between land and water. In case of flooding, the building serves as a space of refuge for residents. The building's location allows for easy access and wide views of the river.



Sophie Marks: Connecting Ecosystems

"Connecting Ecosystems" bridges the gap between two ecosystems on the Isle of Que: the forest and the river. All parts of the design are meant to connect the people and nature into one space.

The structures on the site flow in an organic way in order to work with the site's topography. The nature center is placed in the forest to create a more intimate environment, whereas the kayak rental facility is placed in the water for easy access and views. The bridge that connects these two spaces is a sensory path where visitors can experience nature.