ARCH 6390-001
Small House Design and Technology Seminar

Tuesday, Thursday  11:00 – 12:15
Julee Herdt, Professor of Architecture, Architect
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This course focuses on small-scale residential design, construction, and living. In the course, students will learn how mindful planning and invention can yield beauty, comfort, and delight in small home living. Students will examine, discuss, and challenge current small house design trends and techniques to put forward their own unique ideas. Environmental techniques are taught and applied in all phases of the coursework.

The seminar begins with an overview of case studies including Le Corbusier’s one-room summer home, shipping container residences, tiny house communities, New American cottage design, and mobile architecture. A range of eco-materials and environmentally efficient techno-systems will be presented as options for construction, heating, cooling, and powering of compact homes. A fieldtrip to see shipping containers will help students analyze this strong, streamlined pre-fab system as a module for efficient small home construction.

As a group the class will then select a developing shipping container residential design from Professor Herdt’s Architecture Studio; this will be used as focus for a series of Small House Case Study exercises by the seminar students. By considering the selected home’s spaces, materials, techno-systems, and architectural elements, the seminar students will work separately or in groups to propose and overlay their own Small Home innovations as design options. Proposals will be achieved through drawing, modeling, and physical prototyping. Hands-on fabrication, welding, and digital methods can be used. Projects will be scaled to fit the seminar timeframe.

Study areas can include such as:
- A full room analysis: Kitchen, Bath, Bedroom, Living, exterior or adjacent landscape areas

Or, students can develop and fabricate a green design innovation such as:
- A multi-tasking furniture hardware detail
- A furniture design: Free-standing, built-in, flat pak and/or multi-functional
- 3D printed construction joinery or fastening element
- An eco interior finish method
- A cast metal door lever or pull, dining utensils, or other architecture component
- An interior or exterior screen or partition detail
- An exterior eco-siding detail
- A connector for attachment of construction materials to steel shipping container structures
- Or other idea based on the student’s personal design interest

The class can be taken as a stand-alone course. Or it can be taken in conjunction with Professor Herdt’s “Small-Scale Home Design” Architecture Studio.