**Winter 2024**  
**Syllabus Arch 4/584**  

**Scaffolds Studio**  
Design & Fabrication of Living Spaces for Ecosystem Integration

**Time**  
M W F 1:00 - 4:50 pm

**Studio Space**  
TBC

**Credits**  
6.00

**Instructor**  
Mary Polites, Assistant Professor  
mpolites@uoregon.edu

**Office**  
307 Gerlinger Hall  
Office Hours W/F 11:00 - 12:00, Zoom: uoregon.zoom.us/j/94230245113

**Studio Description**  
This studio aims to investigate the principles underlying the design of cost-effective housing projects through the application of digital fabrication techniques that facilitate the integration of living systems within indoor spaces. The basis of studio will apply the current methods of digital fabrication for residential construction in the US. Students will be working at the scale of micro housing units exploring urban context that achieves density and new programmatic use of the site compared, to conventional residential developments.

The studio curriculum is organized into distinct modules, each designed to impart building techniques and skills that culminate in a comprehensive and detailed outcome. There will be a short introduction to the digital methods necessary in the studio, introducing techniques essential for digital fabrication, urban analysis, and generative form finding through Rhino and Grasshopper. The studio's workflow will commence with the exploration of a specific component typology, progressing to the comprehensive development of this unit through systematic scaling and iterative processes. The resulting typologies will be an extension of the logics discovered at this component scale.

Consider this studio a design build that will have fabrication every week. We will be modeling at the prototype scale as well as at full scale. Students should expect to pay for fabrication materials, time, and final deliverables, such as a booklets, as part of this course. These fees are not part of the course fee.

Upon completion of this course students will have:
- Understanding of interior infrastructure systems
- Understanding of living systems and how architecture can integrate these systems
- Gain skills needed to design and fabricate through digital fabrication
- Gain experience in working across platforms of Rhino, Grasshopper, InDesign & digital and analog fabrication
- Gain interdisciplinary experience with researchers and students at the Knight Campus and the Dalton Lab

**Paired Media Course**  
This studio will be applying research findings from the Scaffolds Assemblies ARCH 4/523 on Tuesdays and Thursdays from 1200-1:50 pm. If possible, it’s great if you can take both the media course and studio, as the work in both classes will be linked.