Hi-Pe+ Urban Infill Housing

High-Performance+...High-Density Housing inspired by the Passive House Standard**

This studio will explore opportunities, challenges, and innovative strategies for the design of highly energy efficient urban infill housing, inspired by the Passive House** energy efficiency standard. The project site is a 1.6 acre vacant lot in the Friendly neighborhood in Eugene. This infill project will investigate the potential for locating between 12 and 20 residences, parking, and shared garden and living amenities in a newly emerging small neighborhood node. The term will be structured along the lines of contemporary architectural practice, with the opportunity to study energy efficient detailing strategies, incorporate sophisticated building science techniques, consider zoning and building code constraints, and explore material options, while pushing toward the successful integration of effective environmental strategies with a strong programmatic, contextual, spatial and aesthetic response.

Areas of study include:

- Comparison of precedents, including site visits
- Discussion of single-family, row house, and multifamily housing within the context of zoning code and site design
- Schematic design phase, with emphasis on scale, materials, and coordination of private and public spaces
- Research and evaluation of environmentally preferable materials, building systems and components
- Documentation phase, with opportunity to develop design strategies and details along Passive House guidelines
- In-depth understanding of Passive House design, detailing, and construction principles with specific attention paid to building envelope, indoor health and environmental concepts.

Times: MWF 1:00pm to 5pm

**The Passive House concept is widely considered the most ambitious performance-based energy standard for buildings. Passive Houses on average use 90% less energy for space conditioning than code-designed houses. The Passive House standard aims to play a vital role in reducing building sector fossil fuel consumption and carbon emissions. Over the past fifteen years, tens of thousands of homes and commercial buildings have been built to the Passive House standard throughout Europe. More than 120 Passive Houses have currently been certified across the United States and dozens more are in various stages of development.