

Grit, Urban Design and Architecture Studio

ARCH 4/584 Intermediate Design Studio

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How do we understand the urban processes of a site to design architecture that acknowledges our understanding urban ecology for inhabitants?

Architectural experiences in growing mid-sized cities such as Eugene and Springfield, Oregon are shifting from those of bucolic to gritty urban experiences. Public space and urban transportation is quickly changing. The interface of architecture and that urban environment is also changing. Sensors are also becoming cheaper and more easily integrated into both user experience and architectural design methods. Urban life whether in cities such as Eugene, Portland or Barcelona are facing increase urban vibrancy but also increase changes of air pollution, sound pollution and gentrification.

This architecture studio will focus on the development of a real-world mixed-use urban design projects by confronting exciting urban location near noise train crossings, polluted roadways and increasingly expensive and exclusive neighborhoods. The grit of these locations is both human generated and naturally generated.

Objective: 1) teach data collection and visualization; 2) work through design options based on data; and 3) experience informed design-team collaboration with a real-world structural engineer via consults.

Architectural Design Description

Students will develop a project based on the issues mentioned above for an urban design master plan and a +/- 25,000 square foot mid-rise building in Springfield, Oregon.

Island Park gateway location along the Willamette River and Mill Street, between B Street and Main Street.

Highlights

The DeNorval “De” Unthank Faculty Excellence Award - \$5,000 used for:

- 1) a drone to locate existing data collection sensor platforms for air quality, light, sound, humidity and sensors,
- 2) structural design consultations from Portland structural engineer Michael Munzing who has particular experience in CLT, cross laminated timber on Carbon 12 and other projects.

Real-world project with developer CDC Silva Chambers, urban designer Phil Farrington and City of Springfield including bi-weekly interactions. Possible additional financial support for software training, sensor prototypes, printing and CNC model making.

Data-Visualization and urban design computation Grasshopper definitions, methods and Arduino sensor prototypes from UO Barcelona Urban Design Studio **2018** and **2017** as well the **Atmosphere + Design** course.

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