

# rehousing Eugene/Springfield

The housing we produce has important effects at many scales. Right now it causes problems at all of these scales (climate change, environmental degradation, land and resource consumption, cost, loss of community, placelessness, etc.), but each of these problems should be seen as an opportunity: our housing could just as well offer solutions at each of these scales.

But while we architects welcome innovation, everyone else in the housing production process likes the status quo (even here in ecotopia). Most neighborhoods don't want new housing types or higher density. Government agencies take forever to change codes and regulations. Developers want to keep making money doing the same kinds of projects. If our proposals are ever to have an impact in the world outside academia, we must learn how to adapt our universal goals and types to meet local concerns and conditions, to reinforce the existing places. Technological solutions which ignore the reality of current constraints – market preferences and financial feasibility – will see limited implementation and have little effect.

The problems may be global, but there are also specifically local problems:

- There is a housing crisis in the Eugene-Springfield metropolitan area, as housing is increasingly unaffordable, and inappropriate for different household types.
- We produce single-family, detached housing for nuclear families, and large multi-unit buildings for students.
- There is a whole range of housing in-between that used to be produced, and could be again – this is now being called the “missing middle”.

Beginning in the prerequisite fall term Housing Design (ARCH 4/510) course, we will work with Eugene-Springfield planners, neighborhood groups and housing activists, to identify typical sites, typical households, and useful housing types to develop. (See the nearby course description).

In the winter term we will examine typical unit and building designs that will work with typical sites, developing a kit-of-parts that can be applied on a range of typical sites. Later in the term, students will focus in upon specific types in sites to develop in great detail.

The final designs will be used to reverse engineer proposals for “form-based codes”, that is, start with the type of housing you want, and then rewrite zoning ordinances to facilitate these types.

This will be a reality-based studio, leading towards proposals which will hopefully be adopted by the cities, and which may actually lead to the construction of demonstration projects.

## Premises and goals

- Sustainable inhabitation of the earth by humans can only be achieved through changing the **typical** patterns of building and dwelling in the modern world, at all scales. Individual signature buildings will not do it.
- Housing and settlement pattern are critical places to focus, perhaps the most critical.
- While housing design must respond to particular parameters (site, market, program), it must also respond to global parameters (building technology, production system, economics, environmental goals).
- Responding intelligently to the global parameters will yield clear housing types (at all scales) and systems, which can then be adapted to address local and particular conditions.
- Projects should push the boundaries towards serious environmental response, integrating issues of sustainability with programmatic demands and spatial design from the beginning.
- However, students must demonstrate where their projects fall in terms of technological, social and economic feasibility, according to current conditions.
- Architecture students should graduate with more than good intentions - we can use this time in school to test new ideas and prototypes, seeing which ones could rebuild and reorient the housing production system.

## Studio methodology

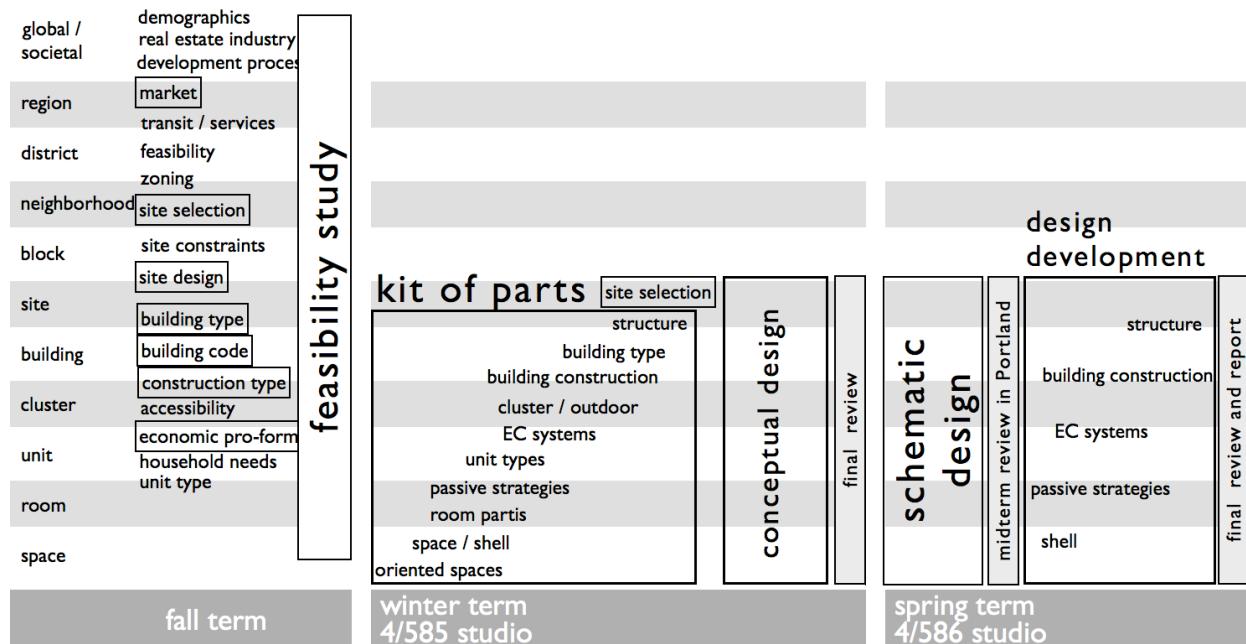
- **Typology:** Development of an integrated set of concepts and types for multi-family housing, from the scale of the room to that of the site.
- **Energy and environmental strategies:** These will be developed from the beginning of winter term, in tandem with typological explorations, to ensure that building performance is one of the generators of conceptual design. Detailed energy modelling will follow in the spring, with the goal of achieving net-zero performance.
- **Program:** Students will produce their own programs for their projects, which should reflect their understanding of demographics and market trends in the next 50 to 100 years. Program statements should be overwhelmingly focussed upon housing components; any ancillary uses should be minimal and diagrammatic.
- **Sites:** Rather than picking a site and designing a building, students will develop typical

approaches and look for sites that work with them. Site selection will occur later in winter term, after this development of types and strategies. The studio will work with the local communities in the selection of sites.

- **Density:** Much prior work and analysis has shown that low-rise high density is the way to go, for reasons of practicality and sustainability.

## Format and Process

- All students in this studio must enroll in Arch 410/510, Housing Design, in fall term. This course will cover current issues, technologies and processes in housing production.
- Terminal studio students in this course will lead teams comprising other enrolled students to complete a series of focussed projects, which when assembled and integrated at the end of fall term will constitute a detailed project proposal and feasibility analysis. This report does not necessarily define your project for the following two terms – final definition of program, scope, intent and site selection will occur during winter term. However, the prior feasibility study should familiarize students with the analyses and tools required to make those later decisions.



## Issues to be explored

The full range of issues as enumerated in the LEED criteria, or the Green Studio Handbook, will be covered. The instructor will also attempt to steer students towards issues he is particularly interested in, such as:

- Unit designs that work for underserved household types and demographics
- building envelopes and edges that work technically and socially

Target minimum net densities in this studio will be in the 30 units or 75 residents per acre range.

- **Scale:** Studio projects that are too ambitious in scale often fail to reach the desired degree of development, as students spend their time solving problems they've inadvertently created for themselves. So specific design projects should be limited in size and complexity.

- Winter term will follow the diagram below, first addressing global parameters, to develop a conceptual / typological kit-of-parts. So inverting the usual studio order, much of **winter term will be for preliminary design development**. This conceptual kit-of-parts will then used to design particular buildings on real sites.
- **spring term will continue with schematic design**, including unit, building and site design simultaneously. A second round of design development will follow, as students revisit the technology decisions made during winter term.
- Design decisions will be driven by clear criteria, some of them quantitative. Schematic economic and energy modelling will be used throughout the whole process.

- passive heating and cooling strategies (including ventilation)
- open spaces that balance privacy and community
- development patterns which create pedestrian neighborhoods, or enhance existing neighborhoods
- futureproofing and adaptability for changing demands in the next century
- innovative building systems.