The primary challenge of our era is to change the course of our society to reduce the impacts of unavoidable climate change. The carbon footprint of the United States is largely the result of our preference for the detached house and the consequent development pattern of sprawl over the past half-century, a pattern that has now spread to the rest of the world that can afford it. If we are to make any progress in slowing climate change, we must find alternative models for housing our population. Architects have set a demanding agenda for themselves with the 2030 Imperative. But we need more than resolve; we must extend our knowledge and skills so that as society shifts towards a more responsible way of dwelling, we have some clear and ready answers. We should respond to global concerns with a range of universal types that can fulfill our changing needs and address our changing circumstances, and with a firm grasp on emerging technologies that will enable us to reach those goals.

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.

**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, and the application of that system to specific sites in the northwest.
- **Energy and environmental strategies:** These will be developed from the beginning of winter term, in tandem with typological explorations. We hope to secure a strategy and computer-modelling consultant for the studio, who will assist the students in completing quantitative performance analyses throughout the studio.
- **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:** Site selection will occur later in winter term, after development of types and strategies. The studio will look for collective opportunities or else students may propose their own locations.
- **Density:** Much prior work and analysis has shown that low-rise high density is the way to go, for reasons of practicality and sustainability. 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.
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.
- 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, 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.

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:
- building envelopes and edges that work technically and socially
- 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
- industrialized housing, open building systems, and their appropriate use

Reading list

A short list of references that will enrich your summer:
- Leupen & Mooij, Housing Design: a Manual
- Stewart Brand, How Buildings Learn
- NJ Habraken, The Structure of the Ordinary
- Corbett and Corbett, Designing Sustainable Communities
- Jørn Ørum-Nielsen and Mike Pease, Dwelling
- Dan Solomon, Rebuilding and Global City Blues
- Kwok and Grondzik, The Green Studio Handbook
- Dalziel and Cortale, A House in the City

Past student work

Can be seen at:
http://pages.uoregon.edu/pkeyes/