From Ivory Tower to Tilling the Soil: Universities as Catalysts for the Sustainable City

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“Retooling cities means new markets for Oregon companies” – Portland Business Journal

About SCI
Sustainable Cities Initiative (SCI) is a cross-disciplinary organization at the University of Oregon that seeks to promote education, service, public outreach and research on the development of sustainable cities.

Our work addresses sustainability issues across multiple scales, from the region down to the building, and emerges from the conviction that creating the sustainable city cannot happen within any single discipline. SCI is grounded in cross-discipline engagement as the key strategy for solving community sustainability issues. We serve as a catalyst for expanded research and teaching; market this expertise to scholars, policymakers, community leaders, and project partners; and work to create and sponsor academic courses and certificates. Our work connects student passion, faculty experience, and community need to produce innovative, tangible solutions for the creation of a sustainable society.

For More Information:
Professor Nico Larco (Architecture): nlarco@uoregon.edu
Professor Marc Schlossberg (City Planning): schlossb@uoregon.edu
sci.uoregon.edu

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Sustainable Cities Initiative

The Sustainable Cities Initiative is a cross-disciplinary effort that integrates research, education, service, and public outreach around issues of sustainable city design. SCI works at a variety of scales, from regions to individual buildings, actively seeking, through multiple perspectives and disciplines, solutions to sustainable city design problems.

SCI synthesizes existing faculty research work under a single theme, serves as a catalyst for expanded research and teaching and brings this expertise to scholars, funders, project partners, and policy makers. Additionally, SCI is integrating design, planning, ecology and public policy to create an education in sustainability issues that cuts across scales and disciplines.

SCI Goals
- To conduct multidisciplinary research to meet local, regional, and national goals for sustainable city design and function
- To attract and train the nation’s best students interested in sustainable cities, from design to policy
- To engage national experts in a mutually beneficial discourse and exchange of ideas through the Experts-in-Residence program
- To provide service and technical assistance to Oregon and beyond

Sustainable Cities Year
The Sustainable City Year ‘partners’ with one Oregon city per year to work with SCI through a variety of studio and applied coursework to: 1) provide real service and movement to a local city ready to transition to a more sustainable and accessible future; 2) apply their training; and 3) provide students with a real world project to investigate.

The partner city for 2009-2010 is the City of Gresham, Oregon. Through the academic year, twenty courses, 17 university faculty and over 250 students will participate in the Sustainable Cities Year. Several courses are paying special attention to the Rockwood area, including three planning courses, a demographic study and a design studio looking at the redevelopment area with vacant parcels next to light rail.

Other SCI Strategies
The Sustainable Cities Initiative works in other key areas. One area is the core challenge for US cities in how to transform suburbs into more sustainable communities. Building on current nationally recognized work, SCI works with cities, state agencies, and national policy makers to achieve this goal. Secondly, the University of Oregon is currently known as a national leader in research connecting sustainable city form and active transportation (walking and biking). SCI’s faculty are key investigators in this research. Finally, Green Cities research and practice explores the role of nature in cities. SCI is devising new approaches in policy, the built environment and landscape design that actually allow human settlement to add to the natural environment rather than deplete it.
Sustainable Cities Year - Gresham
Project Descriptions - Fall 2009
The **Sustainable Cities Year** Initiative is a ‘partnership’ with one city in Oregon per year where a number of courses from across the University focus on assisting that city with their sustainability goals and projects. The Sustainable Cities Year faculty and students work with that city through a variety of studio projects and service learning programs to: 1) provide students with a real world project to investigate; 2) apply their training; and 3) provide real service and movement to a local city ready to transition to a more sustainable and accessible future.

With just over 100,000 people, **Gresham** is the fourth largest city in Oregon. It is bordered to the east by Portland, the largest city in the state. Gresham is home to the Mount Hood Jazz Festival and is known as “The City of Music”. It is close in proximity to the Columbia Gorge National Scenic Area and Mount Hood, the highest point in Oregon. Gresham has a wide variety of neighborhoods including the Civic Center, known for its active transportation network, rapid transit connections and residential, commercial and retail mix.

**Fall 2009 Sustainable Cities Year Courses**

1. **Sustainable Suburbs**  
   Nico Larco, Assistant Professor - Architecture  
   Michael Parkhurst, Associate City Planner - City of Gresham  
   Studio focuses on analyzing suburban development in the Rockwood Triangle area, investigating how this area can be modified to attain sustainability goals, including integration with the surrounding residential areas, re-designing commercial development and infill potentials. The study will produce a Retrofit Plan and details of the project area, along with specific sustainability recommendations to be considered in the City’s upcoming Rockwood Design Standards project.

2. **“Crossings Site” - Integrating Ecology & Mixed-Use TOD**  
   Brook Muller, Associate Professor - Architecture  
   John Pettis, Associate City Planner – City of Gresham  
   Studio project focuses on a mixed-use development at the “Crossing” site along Civic Drive in Gresham. Architecture and landscape architecture students will work in teams to explore the complex design interface between development programming and habitat quality within an urban context. A primary studio focus will be to identify synergies and potential conflicts associated with Metro’s Transportation Oriented Development (TOD) and Nature in Neighborhoods (NiN) policies. Project areas include community engagement around sustainability, multi-family housing and turning Gresham into its own city, rather than a bedroom community. The studio will produce an Ecological Development Plan and Details.

3. **Specific Area Sustainable Development Concept Plan**  
   Rich Margerum, Associate Professor; Bob Parker, Instructor; Robert Young, Assistant Professor – PPPM  
   Michael Parkhurst, Associate City Planner – City of Gresham  
   This three-course effort in the Department of Planning, Public Policy, and Management (Introduction to Planning Practice, Planning Analysis and Human Settlements) centers around a term-long project that looks at the development and a conceptual land use plan for the Central Rockwood Area. Students will develop a Rockwood and Site History document, a demographic and economic profile, Site Analysis maps and a Site Redevelopment Plan. The Redevelopment Plan will incorporate findings from the Sustainable Suburbs and Civic Engagement projects.
4. **Sustainability Focused Data Analysis**  
Jessica Greene, Associate Professor – PPPM  
Molly Vogt, GIS Specialist – City of Gresham

Students complete a real-world data analysis final project that includes writing a memo describing the results and the policy or management implications. As part of the Sustainable Cities Initiative, students’ final class project will be to analyze City of Gresham data to answer the following question: To what extent do walkability, crime, and neighborhood predict housing prices? The best written memo will be submitted to the City of Gresham as a report in December 2009.

5. **Citizen Engagement**  
Dan Carol, Instructor – PPPM  
Michael Parkhurst, Associate City Planner – City of Gresham

Course teaches students the key elements of community change through applied experiences and public engagement “lab experiments” such as walking and biking surveys, community observation papers, energy surveys and other mechanisms. The project will concentrate on the unique demographics of the Rockwood area, producing citizen survey results, an engagement strategy document identifying new ways to engage residents in the Rockwood Community.

6. **Gresham Quarry Site Analysis/Design**  
Roxi Thoren, Assistant Professor – Landscape Arch & Architecture  
Lauren McGuire, Senior City Planner – City of Gresham

The landscape urbanism seminar proposes to study the Gresham quarry site, a post-industrial site owned by Multnomah County. Students will analyze the site’s soils and hydrology, ecology and climate, and cultural history. They will then propose urban design ideas for the site. Because the course is a seminar, not a design studio, the designs will be schematic. They will be grounded in useful site analysis, and will provide ideas for discussing alternate uses for the site. The project will produce Site Analysis Maps and reports, along with redevelopment schematics and narratives for the City of Gresham.

7. **Green Cities**  
Robert Young, Assistant Professor – PPPM  
Jonathan Harker, Comprehensive Planning Mgr – City of Gresham

The course will, in coordination with the City’s Planning Department and other relevant Departments, review specific city planning documents (TBD with City) to reflect advancements in sustainability that can be beneficial to Gresham’s future and incorporated into its development as a green city. The project will focus on the Springwater area, immediately outside of city limits. Expected in the project outcomes is an evaluation of “net zero” developments which reduce the need for costly traditional infrastructure, strategies to jumpstart sustainable development in the Springwater area and a cost/benefit analysis evaluating localized infrastructure options.
8. **Shaping Light**  
Nancy Cheng, Associate Professor – Architecture  
David Brugato, Facilities Manager – City of Gresham

Studio focuses on design forms and spaces that enhance daylighting and increase user awareness of nature through changing light. Students will work with digital modeling, analysis and fabrication tools to understand the connection between form and performance. In Gresham, students will examine how ideas from panel design can be applied to retrofitting the west-facing offices of Gresham City Hall. As the major term project, the students will design a Tri-Met commuter rail station in Gresham, orchestrating and detailing small structures to create a large urban impact. They will study how to shelter users from natural forces while engaging them with the dynamic qualities of sun, wind and water.

9. **Programming Study for Gresham City Hall**  
Jean von Bargen, Instructor – Architecture  
Brian Martin, Associate City Planner – City of Gresham

Course uses theory and methods to uncover and define requirements for an architectural project including philosophic, sociological, operational, economic, and contextual issues. The project will work with the City of Gresham staff to evaluate four possible sites for a new City Hall: (1) South end of Town Fair, (2) West of the Center for the Arts, (3) South of Gresham Central Transit Center and (4) On both sides of Main at Division. Results of the project will inform the design project studio for a new City Hall.

10. **Climate Future Forums and Climate Prepared Communities - also in Winter and Spring 2010**  
Bob Doppelt, Associate Professor;  
Stacy Vynne, Research Assistant – Climate Leadership Institute  
Dan Blue, Recycling & Solid Waste Manager – City of Gresham

Project helps communities and government agencies in Oregon understand the risks and prepare for climate change. Phase I downscales climate models, engages natural scientists in ecosystem-based forums, engages local, state, and federal government officials and stakeholders and working with government officials and stakeholders to identify recommendations for building resistance and resiliency within natural, human, built and economic systems. Phase II works with partners in each basin to identify, develop and implement specific program and policy recommendations for preparing integrated natural, human, built and economic systems for climate change. The outcome is an action plan that can be locally implemented. The project has a regional focus in Clackamas and Multnomah Counties, but will also include Gresham.
The Sustainable Cities Year Initiative is a ‘partnership’ with one city in Oregon per year where a number of courses from across the University focus on assisting that city with their sustainability goals and projects. The Sustainable Cities Year faculty and students work with that city through a variety of studio projects and service learning programs to: 1) provide students with a real world project to investigate; 2) apply their training; and 3) provide real service and movement to a local city ready to transition to a more sustainable and accessible future.

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Winter 2010 Sustainable Cities Year Courses

1. **Gresham City Hall Design – Eugene – ARCH 484/584**
   Erin Moore, Assistant Professor – Architecture
   Brian Martin, Associate City Planner – City of Gresham

Architectural design students will develop proposals for a new city hall for the city of Gresham to serve as a banner of sustainability in the community. Proposals should use sustainable design strategies to minimize associated carbon emissions and to offer ecologically rich public space. Students will be encouraged to envision a building that generates rather than depletes clean air, water, and habitat or that offers long-term carbon sequestration. Students should consider the full lifecycle of building materials so that a high-performance building today may be a stock of resources for the future. The studio will build on pre-design work—site selection and program development—established by Jean von Bargen’s programming students in Fall 2009.

2. **Gresham City Hall Design – Portland – ARCH 484/584**
   Kelcey Beardsley, Instructor – Architecture
   Brian Martin, Associate City Planner – City of Gresham

Architectural design students will develop proposals for a new city hall for the city of Gresham to serve as a banner of sustainability in the community. Proposals should use sustainable design strategies to minimize associated carbon emissions and to offer ecologically rich public space. Students will be encouraged to envision a building that generates rather than depletes clean air, water, and habitat or that offers long-term carbon sequestration. Students should consider the full lifecycle of building materials so that a high-performance building today may be a stock of resources for the future. The studio will build on pre-design work—site selection and program development—established by Jean von Bargen’s programming students in Fall 2009.
3. **Water, Microecologies and Density – ARCH 484/584**  
Brook Muller, Associate Professor – Architecture  
Justin Cutler, Administrative Analyst – City of Gresham

Studio focuses on a multi-story, multi-unit transportation oriented development (TOD) at the “Crossings Site” in Gresham, Oregon. This studio will explore the potential synergies between TOD and habitat friendly development (HFD). The studio will build from work produced by students in the Fall 2009 Eugene-based studio. The project goal is to utilize previous studio research as a basis for design explorations, with the expectation that students will focus efforts on project development. The project will produce detailed plans for consideration by the City of Gresham staff.

4. **Sustainable Commercial Development – PPPM 607**  
Yizhao Yang, Assistant Professor – PPPM  
Jonathan Harker, Comprehensive Planning Mngr– City of Gresham

Project develops upon the work completed with Sustainable Development Concept Plan performed in the Rockwood, expanding to community commercial zones and residential areas for the City of Gresham. The study will perform a housing and retail inventory analyses in the area, along with a more focused approach to planning for more sustainable active living and transit in the area. Project will provide to the City of Gresham potentials levels of commercial development in existing commercial areas in relationship to the existing and planned future residential development.

5. **Gresham Quarry Site Design Plan – LA 410/510**  
Roxi Thoren, Assistant Professor – Landscape Arch & Architecture  
Lauren McGuire, Senior City Planner - City of Gresham  
Tom Hansell, Lane Use & Trans. Svcs. Manager – Multnomah County

The studio will study the Gresham quarry site, a post-industrial site owned by Multnomah County. The studio will develop from work completed during the Fall 2009 Landscape Urbanism Seminar. Students will develop urban design plans for the site. They will be grounded in useful site analysis, and will provide ideas for discussing alternate uses for the site. The project will produce development plans and designs for areas of the quarry site, and provide final designs to the City of Gresham.

6. **Public Folklore and Cultural Programming – AAD 410/510**  
John Fenn, Assistant Professor – Arts & Administration  
Michael Parkhurst, Associate City Planner – City of Gresham

The course steers students toward an ethnographic exploration of the cultural groupings and associated community goals of the Rockwood area in Gresham. Students will focus on the ways in which arts and culture figure into community/cultural development. The first project is short-term and would comprise students conducing ethnographic research (interviews, observations, community engagement) in Rockwood over the ten-week winter term. The interviews would be structured so as to elicit broad observations on community, including gathering ways to best engage broader community participation in the process. The second project would comprise a community ethnography training program, most likely manifested through a grant/project proposal. Students will draft planning documents for a training program (drawing on established models from around the U.S.) and link such a program to the specifics of the Rockwood area.
7. Climate Future Forums and Climate Prepared Communities - also in Fall 2009 and Spring 2010

Bob Doppelt, Associate Professor; Stacy Vynne, Research Assistant – Climate Leadership Institute
Dan Blue, Recycling & Solid Waste Manager – City of Gresham

Project helps communities and government agencies in Oregon understand the risks and prepare for climate change. Phase I downscales climate models, engages natural scientists in ecosystem-based forums, engages local, state, and federal government officials and stakeholders and working with government officials and stakeholders to identify recommendations for building resistance and resiliency within natural, human, built and economic systems. Phase II works with partners in each basin to identify, develop and implement specific program and policy recommendations for preparing integrated natural, human, built and economic systems for climate change. The outcome is an action plan that can be locally implemented. The project has a regional focus in Clackamas and Multnomah Counties, but will also include Gresham.

Map of Gresham Project Areas - Winter 2010

Source: Google Maps

Updated 01.20.2010
Students wow Rockwood with ideas
*Gresham residents, leaders amazed by UO proposal*

**BY MARA STINE**
*The Gresham Outlook, Dec 29, 2009, Updated Dec 30, 2009*

About half a year ago, Gresham urban renewal leaders parted ways with a promising developer whose vision for Rockwood didn’t agree with theirs.

Now, some of those same leaders are wide-eyed in amazement and awe at what a group of college students have proposed for the same area.

The students from University of Oregon professor Nico Larco’s class unveiled six development plans for the urban renewal district’s Catalyst Project, also called the Cultural Marketplace, during a meeting Wednesday, Dec. 9.

Approximately 75 people attended the meeting, during which the students’ work was unveiled as part of a pilot program called the Sustainable Cities Initiative. The program teams University of Oregon graduate students with Gresham to help shape a more sustainable future for the city.

A total of 250 students from the university’s School of Architecture and Allied Arts are taking part in the yearlong collaboration. One of fall term’s 11 classes centered on the Rockwood neighborhood and called for students to propose six development schemes for a 6.5-acre parcel at the heart of the urban renewal district.

Larco – an assistant professor of architecture who co-directs the initiative with professors Robert Young and Marc Schlossberg – estimates the 18 students in his design studio spent a combined 5,400 hours creating the six scenarios.

Judging from the community’s reaction at the meeting, all that hard work paid off.

“It went extremely well,” Larco said. “I was thrilled. We wanted to push the conversation forward and provide a range of scenarios and options for people to consider.”

Mission accomplished, said Richard Strathern, a Gresham redevelopment commissioner, city councilor and liaison to the redevelopment commission’s advisory board.

“I was just impressed how they came back with so much,” he said. “You just saw so many possibilities, your brain was spinning.

“From a citizen engagement point of view, it’s the best thing I’ve seen in the three years I’ve been on the City Council.”

**Rockwood urban renewal**

Gresham residents in 2003 created the city’s first urban renewal district in the city’s western neighborhood in hopes of improving the low-income, high-crime area. After a grocery store closed in the district, urban renewal commissioners bought the property on the northeast corner of Southeast 185th and Stark Street in 2006 and demolished the store.

The plan: Build a multi-phase mixed-use development including for-sale condos and townhouses, commercial and retail space, plus an area for the community to gather.

After six developers bid on the project, the commission selected Williams & Dame Development, a prestigious Portland firm credited with the renaissance of Portland’s Pearl District and the city’s tony South Waterfront area.

But when the economy nosedived, Williams & Dame proposed anchoring the development with a YWCA. In May, urban renewal commissioners severed ties with the firm and all but went back to the drawing board, promising more community involvement.
Strathern called the UO students’ ideas fresh, innovative and better than anything he'd seen from the six developers who made pitches for the project.

“There was nothing so stimulating as this,” he said, adding that he heard a few others at the meeting say the same thing. “It was way beyond anything that’s been presented before. They've done much more with that 6-and-a-half acres than I’ve seen.”

**Impressive ideas**

Strathern was especially impressed with two concepts.

The first one lays out the future of the Rockwood Triangle in three phases. Phase I between 185th and 188th calls for moving an under-used park-and-ride lot to the corner of 188th and Burnside. The lot includes space for an open-air market and is surrounded by retail and commercial space to the south, a grocery store to the southwest and housing and live/work studio space to the west.

Phase II includes Multnomah County’s new courthouse on the southwest corner of 185th and Stark, but really focuses on the wedge of land between 188th, Burnside and Stark. It is slated for Mt. Hood Community College’s expansion and commercial use along 188th.

Phase III also has commercial space on the northwest corner of 185th and Stark. Housing is clustered between Burnside and Pine just west of 185th.

The other design that wowed Strathern was for a plaza on the southwest corner of 188th and Burnside. During the workweek, it can function as parking for the nearby courthouse. But on the weekend, it becomes space for vendors and merchants when the plaza morphs into an open-air marketplace.

Lori Stegmann – a local insurance agent, vice chair of the Rockwood Business Coalition and a member of the redevelopment commission’s advisory committee – also was blown away by the presentations.

“If you hadn’t had known they were students, well, you wouldn’t have known they were students,” she said. “I was really amazed by their work.”

One of her favorite ideas was the Rockwood Boulevard concept: A plan to create a curving Main Street out of a jagged road now linking 188th Avenue north of Burnside to 187th south of Stark.

It calls for two large anchor stores on either side of the street lined with small unique storefronts. The plan also includes a park with covered pavilion, seating and a community center.

Stegmann marveled at the student’s ability to create non-pie-in-the-sky ideas that could actually get off the ground, and that resonated with the community, and the research they did interviewing residents and studying the area and its challenges.

“They did their homework,” she said, adding that she led them on a walking tour of Rockwood to give them a lay of the land and some history. “They interviewed pastors, business owners, residents. They interviewed anybody they possibly could about the Rockwood community.”

**Win-win**

Nico said his students benefited from the collaboration just as much as the city. They're getting valuable real-world experience and honest feedback on their concepts.

“It was very rewarding as a student to see the reaction of the people your design will ultimately affect,” said Lauren Schwartz, a grad student who worked on the Rockwood Boulevard concept. “The community members were very insightful as to the perceived needs of their community and how our urban design schemes would help build their community.”

Meanwhile, Strathern is eager to see what students in the other Gresham-based classes have come up with.

Students studied Gresham’s downtown, Civic Neighborhood and Springwater areas; considered four sites to determine the best place for a new City Hall building in downtown Gresham; examined how walkability, crime and neighborhood affect housing prices; analyzed the Multnomah-County owned rock quarry known as Vance Pit for potential development; designed a MAX station in Civic Neighborhood to maximize the use of daylight; studied how to make schools more sustainable; developed an action plan to deal with climate change; and integrated ecology into a mixed-use transit-oriented development at the “Crossings Site,” where the MAX tracks cross Civic Drive in the Civic Neighborhood.

The projects are conceptual in nature, but Gresham will take the students’ ideas and consider them for future use.

And who knows. Maybe they’ll serve as the foundation for upcoming projects, Stegmann said.

“I hope a developer can incorporate the ideas into something really amazing,” she said.
Retooling cities means new markets for Oregon companies

Did you know North Dakota consistently gets close to twice as much federal funding for development-related projects as Oregon?

Despite its small population (639,715 to Oregon’s 3.79 million) the Peace Garden State usually ranks among the top five states in this category while Oregon sits in the bottom five.

Our ability to change this depends a lot on how quickly the local business community can adapt to a new environment in which sustainability has become standard operating procedure.

Last year, the "big three" federal agencies (Housing and Urban Development, the Department of Transportation and the Environmental Protection Agency) formed the Interagency Partnership for Livable Communities. New federal rules being developed in response to this partnership will give us a chance to reinvent how we build, manage and direct our cities. For housing, transportation and related projects, it’s a whole new game. If you're in contracting, development, design or finance, this means your game is changing too.

Being competitive in this new environment will require you to apply the same livability and sustainability filters to your core operations as those used to judge the merits of projects put forward for federal funding. The projects you take on may be the same, but the way you do them will have to change if you want to remain competitive.

Local jurisdictions see this shift happening at the federal and state levels and are re-tooling to prepare for what lies ahead. This year, the Sustainable City Year program at the University of Oregon is partnering with the City of Gresham to facilitate this process. Sustainable City Year is a university and city partnership focused on city-identified sustainability projects.

Right now more than 250 future planners and architects from the UO are devoting an entire year to helping shape a more sustainable future for the city of Gresham. The students involved in this project are helping guide how organizations and companies create, grow, and manage their operations in ways that promote the economy, livability and a healthy environment, all in one stroke.

Last term, just 18 of these students spent more than 5,000 hours creating six development scenarios for Rockwood, Gresham’s urban renewal district. Multiply that over the nineteen UO courses focused on fresh ways of looking at
Gresham's future this year, and you can see the impact on the city's ability to win support for shovel-ready projects such as a green city hall.

For many businesses, especially those struggling in economically depressed areas like Rockwood, sustainability may sound like a luxury. However, as Gresham's urban renewal chief, Alice Rouyer, points out, every aspect of how we live will shift as the result of the recession.

In Alice's words, "These students are making the concept of sustainable development come alive for people. What we're seeing in Gresham is that becoming green is the best way to move — and keep — our economy in the black."

The Gresham partnership is among dozens of solution-oriented projects associated with the Sustainable Cities Initiative, a long-term effort by the UO School of Architecture and Allied Arts faculty in collaboration with our colleagues in business and law.

Nico Larco is a UO architecture professor and co-director of the UO's Sustainable Cities Initiative. The UO School of Architecture ranks No. 1 nationally for sustainable design.