

LA 410/510 Urban Sustainability

*All majors are welcome!

*For LA major, this course counts as a LA elective or Area of Concentration.

*For Ecological Design Certificate, this course counts as a foundation course.

CRN: 13469 (undergrad); 13482 (grad) 4 credits

TTh 4:00-5:50 pm Fall 2018 @Lawrence 231

Instructor: [Yekang Ko](mailto:yekangko@uoregon.edu) (yekangko@uoregon.edu)

Office hour: Th 1pm-3pm @ Lawrence 213



This course provides a practical road map toward urban sustainability and resilience through interdisciplinary perspectives, by applying critical design/planning approaches.

This course has three main components:

- **Evidence-based design and planning**
With several decades of promoting urban sustainability worldwide, where are we now? The course explores what the latest science and research tell us regarding our understanding of complex urban systems and how we can bring them to design and planning. Case studies demonstrate place-based solutions toward environmental sustainability, resilience, and equity from around the world.
- **Local best practices from the City of Eugene**
Guest speakers from various City of Eugene departments, (e.g. public works, planning, sustainability, etc.), and non-profits will share their current best practices. Students will see the whole picture of how a city systematically pursues sustainability across sectors using Eugene as an example.
- **Community action projects with the City of Eugene Parks and Open Space**
Throughout the term, students will conduct a real-world group project directly working with the City of Eugene Parks and Open Space department. With the recent passage of a parks-related bond measure, several new exciting projects are underway and are ready for action! Some previous students continue to work with the city through internships or jobs.

Learning objectives

At the end of this course, you should be able to:

- Identify key principles and tools for designing and planning sustainable cities
- Articulate opportunities and challenges for systematically achieving urban sustainability
- Develop evidence-based strategies to manage trade-offs and promote synergies among different approaches
- Evaluate best practices with critical thinking
- Acquire an ability to manage and implement real world sustainability projects

Required textbook

Condon, Patrick M. (2010). *Seven Rules for Sustainable Communities*. Washington DC: Island Press.

Elmqvist, Thomas et al. (2018) *The Urban Planet: Knowledge Towards Sustainable Cities*. Cambridge: Cambridge University Press. (Full texts available on Canvas)

Other readings draw upon a range of sources and disciplines. They will be available either on Canvas in PDF format or online.

Course format, assignments and grading

This course combines lectures, discussion, student presentations, site visits, and collaborative team work for community service learning projects. The course is designed to maximize active student participation through peer-learning and community engagement. Students are required to complete all assigned readings PRIOR to the class meeting in which they are listed on the schedule.

Grades will reflect class preparation and participation (30%), a case study investigation (20%) and a final group project (50%). In 400/500 level courses, the university requires that graduate students fulfill requirements beyond those of undergraduates. To this end, graduate students will be asked to assist with additional project management and to exercise leadership in team projects. The student engagement inventory that includes assignments and hours engaged for each activity is available in the appendix. Students are expected to keep track of their performance throughout the term and seek guidance from available sources (including the instructor and the GE) if their performance drops below satisfactory levels. More detailed guidelines and expectations follow:

Requirements	Evaluation	Weight (%)
Class Preparation & Participation (40%)	Attendance & Class participation	16
	Response papers (total 8 essays)	24
Case study Investigation (15%)	Case study presentation	15
Community Group Project (45%)	Midterm review	10
	Final Presentation	20
	Report (or Deliverable)	15
TOTAL		100

There will NOT be a curve. Final letter grades for the course will be assigned as follows:

A+ ≥ 97% A ≥ 93% A- ≥ 90% B+ ≥ 87% B ≥ 83% B- ≥ 80%
C+ ≥ 77% C ≥ 73% C- ≥ 70% D+ ≥ 67% D ≥ 63% D- ≥ 60%
F < 60%

* The course is offered as either graded or pass/no pass. In either case, all assignments must be completed satisfactorily and submitted in a timely fashion to achieve a passing grade.

- **Class Preparation & Participation:** Students are expected to attend class on time, contribute to discussions, and consistently demonstrate that they have completed the readings. Each class, students are expected to submit a response to questions posed by each set of readings for the week to Canvas by no later than noon of the class day (total 8 essays). The essay is for students to be prepared for each class and engage with active discussions in class. Graduate students are assigned additional readings, as noted in the course schedule. Undergraduate students are encouraged to read these additional sources, but it is not required to fulfill course requirements.
- **Case Study Investigation:** Each student will make a 7-minute oral presentation on a best practice of sustainable urban planning and design. Students must consult with Prof. Ko to determine the case study at least two weeks prior to the presentation date. The presentation must include in-depth investigation on the case study such as: a brief background of the project or plan, key stakeholders involved, key elements, challenges and controversies during the implementation process (if any), major contributions to sustainability, critique, and bibliography. Graphic communications (maps, figures, charts, etc.) are highly recommended. Rubrics for evaluating the presentation will be available on Canvas.
 Cast study topics/examples are:
 - Sustainable urban design (site/neighborhood/district scales) –transit-oriented development, net-zero energy communities, urban metabolism, eco villages, or green affordable housing development etc.
 - Municipal climate action planning – domestic and international
 - Green infrastructure planning and design – low impact development, greenway network, regenerative design, or urban habitat restoration etc.
 - Urban sustainability indicators/measures /certifications
 - Resilience design and planning for climate change adaptation
 - Sustainable urban planning (city and regional scales)

- Community Group Project:** Throughout the fall term, student groups will conduct action research projects collaborating with the City of Eugene Park and Open Space. After students sign up for their groups of interests, each group will have short group meetings (15-20 minute) in class to report progress since the previous week, discuss next steps, and assign individual work for the week. In addition to class group meetings, each student is expected to work 3-5 hours per week (3 hours for undergraduate students and 5 hours for graduate students) for 9 weeks (please find more details in Appendix). Throughout the term, each group will meet the community partner for one hour every other week, on average. The evaluation of the project will be based on: a 10-minute midterm progress presentation, a 15-minute final presentation, and a final deliverable (either a report format or any final products requested by the community partner). Graphic communications such as maps, figures, charts, photographs, etc., are highly recommended in the presentations and report. Student contributions to the project will be evaluated by group members and the community partner.
 - Midterm Presentation (Oct 23): 10-minute progress presentation (10 points)
 - Final Presentation (Nov 20): 12-minute final project presentation (20 points)
 - Final Report /Deliverables (Dec 3): Incorporating the instructor and the community supervisor's feedback on the final presentation, each group must submit their completed project report /deliverable by December 7 (15 points).

Course schedule (DRAFT)

*R (reading for everyone); GR (additional reading for graduate students); D (discussion questions); RP (response papers); GM (group meetings)

	Tuesday	Thursday
W1 Overview & Project assignment	9/25 Course overview, student introduction, and case study sign up R: Condon Ch 1; Elmqvist et al. Introduction GR: Elmqvist et al. Ch 1	9/27 Community projects introduction and project sign up R: Brose (2014); Eugene Public Works website GR: Elmqvist et al. Ch 2 RP 1
W2 Sustainable urban forms 1	10/2 Sustainable urban forms 1 R: Condon Ch 2 & 5 GR: Jabareen (2006) RP 2	10/4 Field trip to Opportunity Village and Emerald Village R: http://klcc.org/post/eugenes-tiny-house-experiment-expands-emerald-village https://www.theguardian.com/us-

	<p>D: Why urban forms matter for achieving sustainability? Articulate the role of land use, density, and transit and share examples of (un)sustainable cities from your own experience.</p> <p>GM 1</p>	<p>news/2017/mar/23/tiny-houses-solution-homelessness-seattle</p> <p>GR: Elmqvist et al. Ch 6</p> <p>D: Do you think the Tiny House Movement can be an eco-friendly solution for social justice and affordable housing? What needs to be improved and resolved in order to do so?</p>
<p>W3 Sustainable urban forms 2</p>	<p>10/9</p> <p>Sustainable urban forms 2</p> <p>R: Condon Ch3 & 4</p> <p>GR: Ewing and Cervero (2010)</p> <p>RP 3</p> <p>D: How does the street network affect accessibility? How are the street network and design related to urban density? Share your experience in walking, biking and driving different street network systems in cities across the US and the world.</p> <p>GM 2</p>	<p>10/11</p> <p>Envision Eugene by Zach Galloway (City of Eugene Planning + Development)</p> <p>R: Kelly (2009), Rynne (n.d.); Skim through:</p> <p>Envision Eugene Urban Form Plan</p> <p>Portland 2035 Comprehensive Plan Portland Urban Design Direction</p>
<p>W4 Climate Change</p>	<p>10/16</p> <p>Planning for climate change</p> <p>R: Condon Ch 6; Elmqvist et al. Ch 3; Guiding Principles for City Climate Action Planning</p> <p>GR: Hamlin and Curran (2009)</p> <p>RP 4</p> <p>D: What are the core elements of climate action planning? How can we address both mitigation and adaptation effectively? How can we promote climate action planning in politically challenging regions?</p> <p>GM 3</p>	<p>10/18</p> <p>Eugene’s climate change planning by Chelsea Clinton (City of Eugene Office of Sustainability)</p> <p>R: Boswell et al. (2012) Ch 5; A Community Climate and Energy Action Plan for Eugene (skim through)</p>
<p>W5 Community Resilience</p>	<p>10/23</p> <p>Midterm review</p> <p>R/GR: No reading; prepare the 10-minute group presentation</p>	<p>10/25</p> <p>Community Resilience by Josh Bruce (Oregon Partnership for Disaster Resilience)</p> <p>R: Boswell et al. (2012) Ch 6; McRae et al. (2014) (skim through)</p> <p>GR: Elmqvist et al. Ch 4.</p> <p>RP 5</p>

		D: What vulnerability and risks do we have in Eugene and Oregon? How can we be prepared? How do both sustainability and resilience contribute to climate change planning?
W 6 Urban Ecosystems and Green Infrastructure	10/30 Urban ecosystems and green infrastructure R: Condon Ch7 & 8 GR: Wu (2014) RP 6 D: How are urban ecosystems different from wild landscapes? How do climate change and human intervention affect them? What is the role of urban GI in mitigating and adapting to climate change? How can we plan GI to address equity? GM 4	11/1 L: Eugene’s urban greening by Scott Altenhoff and Michelle Parkins (City of Eugene Urban Forestry) R: Ko et al. (2016); Wolch et al. (2014) GR: Groffman et al. (2017)
W7 Urban design and public health	11/6 Human and environmental health R: TBA GR: Elmqvist et al. Ch 5 RP 7 D: How are human health and ecosystem health are related? How can urban design and planning contribute to human and environmental health, especially in marginalized communities? GM5	11/8 Salmon Safe Parks by Shelly Miller (City of Eugene Ecological Services Team) R: Salmon Safe Certification (skim through)
W8 Measuring Sustainability	11/13 Urban sustainability indicators and metrics R: Committee on Pathways to Urban Sustainability (2016); LEED-ND Citizen Guide (skim through) GR: Elmqvist et al. Ch 8 RP 8 D: Why measuring sustainability matters? What is lacking in current indicators and certifications and how can we improve them? What are the dimensions of urban	11/15 Synthesis: Evidence-based approach for managing trade-offs and synergizing multi-functionality R: Lovell and Taylor (2013); GR: Elmqvist et al. Ch 7 D: How can we best design, plan and manage urban form and green infrastructure for maximizing ecosystem services, reducing GHG emissions and building resilience to disasters, especially for vulnerable populations?

	sustainability that can hardly be measured and how can we incorporate them into planning and design? GM 6	GM 7: Final Project Desk Crits
W9 Final Project Presentation	11/20 Final Project Presentation Prepare a 12-minute group presentation	11/22 Thanksgiving Break – No Class
W10 Final Review Week	11/27 Final Review Week – No Class	11/29 Final Review Week – No Class
W 11 Final Project Deliverable	12/3 Final Deliverable Submission	

**As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.*

Information for Students with Disabilities

The University of Oregon is working to create inclusive learning environments. If there are learning or health considerations that may affect your ability to participate fully in this course, please meet with Prof. Ko as soon as possible to discuss possible accommodations. If this is a documented disability, please request that the Counselor for Students with Disabilities send a letter of verification. You are also encouraged to contact the Accessible Education Center in 164 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu.

Policy Statement on Academic Honesty and Student Conduct

All work submitted must be your own (or your team's) and originally produced for this course. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented. Students are encouraged to work together and assist one another, but unless an assignment is specifically designated as a team project, each student is expected to complete their own work individually. Plagiarism means using the ideas or writings of another as one's own. It includes, but is not limited to (a) the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgement and (b) the unacknowledged use of materials prepared by another person.

Academic Misconduct

The University Student Conduct Code (available at conduct.uoregon.edu) defines academic misconduct. Students are prohibited from committing or attempting to commit any act that constitutes academic misconduct. By way of example, students should not give or receive (or attempt to give or receive) unauthorized help on assignments or examinations without express permission from the instructor. Students should properly acknowledge and document all sources of information (e.g. quotations, paraphrases, ideas) and use only the sources and resources authorized by the instructor. If there is any question about whether an act constitutes academic misconduct, it is the students'

obligation to clarify the question with the instructor before committing or attempting to commit the act. Additional information about a common form of academic misconduct, plagiarism, is available at researchguides.uoregon.edu/citing-plagiarism.

Appendix. Student Engagement Inventory

Educational activity	Hours Undergrad student engaged	Hours Graduate students engaged	Explanatory comments
Course attendance	36	36	4 hr per week x 9
Assigned readings	24	36	3 (4.5) hr per week x 8
Project (including the final report/deliverable)	24	36	3 (4.5) hr per week x 8
Writing assignments	14	14	1 hr for a reading response paper x 14
Fieldwork/experience – on-site meeting with community partner	4	4	1 hr per week x 4
Online interaction with community partner for the group project	0	4	1/2 hr per week x 8
Performance/creative activities	8	8	8 hr preparation for a 7-min case study presentation
	6	8	6 (8) hr preparation for a 10-min midterm group presentation
	8	12	8 (12) hr preparation for a 15-min group presentation
Total hours:	124	158	