

LA 410/510 Urban Sustainability

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 12pm-2pm @ Lawrence 213



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

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 our understanding of complex urban ecosystems. Case studies demonstrate place-based design and planning solutions across the world.
- **Local best practices from Eugene-Springfield Metropolitan Area**
Guest speakers from various departments (e.g. public works, planning, sustainability office etc.) of the City of Eugene and local nonprofits in the Eugene-Springfield Metropolitan region will come and share their current best practices. Students will see the whole picture of how a city systematically pursues sustainability across sectors.
- **Community action projects**
Throughout the term, students will conduct a real-world group project directly working with the City of Eugene Park and Open Space and the Better Eugene-Springfield Transportation (BEST).

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 achieving urban sustainability in a systematic way
- 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.

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

Recommended textbook

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

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 (50%) and a community 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 present a case study (10%), to read additional readings, and to exercise leadership and management 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) if their performance drops below satisfactory levels. More detailed guidelines and expectations follow:

Requirements	Evaluation	Weight (%)
Class Preparation & Participation (50%)	Attendance & Class participation	20
	Weekly response papers (total 6 papers x 4 points); One reflection essay (1 paper x 6 points); one page each	30
Case study Investigation (Graduate students only)	Case study presentation	10
Community Group Project (50%)	Midterm review	10
	Final presentation	20
	Group report (or Deliverable)	20
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 6 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. At the end of the term, students are also expected to submit an individual reflection essay about their learning through the community project and how it is linked to the class materials.
- **Case Study Investigation:** Each graduate student will make a 10-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
 - Resilience design and planning for climate change adaptation
 - Green infrastructure planning and design – low impact development, greenway network, regenerative design, or urban habitat restoration etc.
 - Urban sustainability indicators/measures /certifications
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- **Community Group Project:** Throughout the fall term, student groups will conduct action research projects collaborating with the City of Eugene Park and Open Space and the Better Eugene-Springfield Transportation (BEST). 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 30): 10-minute progress presentation (10 points)
 - ✓ Final Presentation (Dec 3): 15-minute final project presentation (15 points)
 - ✓ Final Report /Deliverables (Dec 6): 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 (20 points).

Course schedule (DRAFT)

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

	Tuesday	Thursday
W1 Overview, Key principles & Project assignment	9/25 Course overview, student introduction, and case study sign up R: Condon Ch 1 GR: Campbell (1996)	9/27 Community projects introduction and project sign up R: Wheeler (2013); Brose (2014) GR: Berke (2016)
W2 Sustainable urban forms 1	10/2 Sustainable urban forms 1 R: Condon Ch2 & 5 GR: Jabareen (2006) RP 1 (W 1& 2 readings) 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. GM 1	10/4 Roles of transit and land use planning in Oregon climate change planning by Rob Zoko (BEST) R: TBA D: What kind of land use and urban design intervention would be necessary to better support public transit and other modes of transportation in Eugene-Springfield? Which areas do we need a particular attention?
W3 Sustainable urban forms 2	10/9 Sustainable urban forms 2 R: Condon Ch3 & 4 GR: Ewing and Cervero (2010) RP 2 (W 3 readings) 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. GM 2	10/11 Envision Eugene by (City of Eugene Planning + Development) R: Kelly (2009), Rynne (n.d.); Envision Eugene D: What is the role of comprehensive plan in improving sustainability of the community? Do you think that Envision Eugene incorporates sufficient sustainability goals and strategies to address its unique challenge?
W4 Climate Change & Vulnerable Populations	10/16 Planning for climate change R: Condon Ch 6; Guiding Principles for City Climate Action Planning GR: Hamlin and Curran (2009); RP 3 (Week 4 readings)	10/18 Field trip to Emerald Village R: Video ; http://klcc.org/post/eugenes-tiny-house-experiment-expands-emerald-village GR: https://www.theguardian.com/us-news/2017/mar/23/tiny-houses-solution-homelessness-seattle

	<p>D: What are the core elements of climate action planning? How can we effectively plan for both mitigation and adaptation? How can we promote climate action planning in politically challenging regions?</p> <p>GM 3</p>	<p>D: Do you think the Tiny House Movement can be a solution for social justice and affordable housing? What needs to be improved and resolved in order to do so?</p>
<p>W5 Resilience & Sustainability</p>	<p>10/23 Community Resilience by Josh Bruce (Oregon Partnership for Disaster Resilience)</p> <p>R: Boswell et al. (2012) Ch 6; Eugene Climate Vulnerability Pilot Review (skim through) GR: ICLEI Adaptation Guidebook (skim through)</p> <p>RP 4 (Week 5 readings)</p> <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?</p> <p>GM 4</p>	<p>10/25 Eugene's climate action 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>D: Do you think Eugene's climate action plan will address key challenges of the community in mitigating and adapting to climate change? What suggestion do you have for the on-going plan updates?</p>
<p>W 6 Mid-term project checkup</p>	<p>10/30 – Midterm review R/GR: No reading; prepare the 10-minute group presentation</p>	<p>11/1 Eugene's urban greening by Scott Altenhoff and Michelle Parkins (City of Eugene Urban Forestry)</p> <p>R: Ko et al. (2018); Wolch et al. (2014) GR: Groffman et al. (2017)</p> <p>D: What are the opportunities and challenges of Eugene's urban forest and green infrastructure planning? What kind of projects or areas should be prioritized in a short and long term?</p>
<p>W7 Urban Ecosystems, Green</p>	<p>11/6 Urban green infrastructure, human and ecosystem health R: Condon Ch7 & 8 GR: Tzoulas et al. (2007)</p>	<p>11/8 Salmon Safe Parks by Shelly Miller (City of Eugene Ecological Services Team)</p>

<p>Infrastructure , and Health</p>	<p>RP 5 (Week 6 & 7 readings)</p> <p>D: How are urban ecosystems different from wild landscapes? How do climate change and human intervention affect them? What are the roles of urban green infrastructure in mitigating and adapting to climate change as well as improving human health, particularly in marginalized communities?</p> <p>GM 5</p>	<p>R: Salmon Safe Certification (skim through)</p> <p>D: What design and planning approaches are necessary to enhance human and ecosystem health from site to landscape scales? Do you think that Salmon Safe certification incorporates proper measurements to evaluate such efforts?</p>
<p>W8 Measuring Progress and Synthesis</p>	<p>11/13</p> <p>Urban sustainability indicators and metrics</p> <p>R: Committee on Pathways to Urban Sustainability (2016); LEED-ND Citizen Guide (skim through)</p> <p>GR: Saha and Paterson (2008)</p> <p>RP 6 (Week 8 readings)</p> <p>D: Why measuring sustainability matters? What is lacking in current indicators and certifications? How can we improve them? What are the dimensions of urban sustainability that can hardly be measured? How can we incorporate them into planning and design?</p> <p>GM 7</p>	<p>11/15</p> <p>Synthesis: Evidence-based approach for managing trade-offs and synergizing multi-functionality</p> <p>R: Lovell and Taylor (2013) GR: Meerow and Newell (2017)</p> <p>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?</p>
<p>W9 Final Project Feedback</p>	<p>11/20 Final Project Desk Crits</p>	<p>11/22 Thanksgiving Break – No Class</p>
<p>W10 Final Project Presentation</p>	<p>11/27 Final Review Week – No Class</p>	<p>11/29 Final Review Week – No Class</p>
<p>W 11 Final Project Deliverable</p>	<p>12/3 Final Presentation Prepare a 15-minute group presentation</p>	<p>12/6 Final Deliverable Submission; Individual Reflection Essay Submission</p>

**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	2 hr for a reading response/reflection paper x 7
Fieldwork/experience – on-site meeting with community partner	4	4	1 hr per week x 4 (every other week)
Online interaction with community partner for the group project	0	4	1/2 hr per week x 8
Performance/creative activities	0	8	8 hr preparation for a 10-min case study presentation
	8	9	8 (9) hr preparation for a 10-min midterm group presentation
	10	13	10 (13) hr preparation for a 15-min group presentation
Total hours:	120	160	