



PPDE 634 Methodology, Methods, and Tools for Urban Sustainability

Units: 4.0

Term: Spring 2024, Mondays 6:00pm - 9:20pm

Location: Dr. Joseph Medicine Crow Center for International and Public Affairs (DMC) – DMC210

Instructor: Dr. Craig Reiter

Office: Virtual

Office Hours: Mondays 12:00pm-1:00pm; by appointment

Contact Info: craigrei@usc.edu

IT Help:

Hours of Service: 24/7 Technical Support

Contact Info: Phone: (213) 740-5555; Email: consult@usc.edu

Session Dates (session code 001)

First day of classes: Monday, January 8, 2024

Last day to add: Friday, January 26, 2024

Last day to change to Pass/No Pass: Friday, January 26, 2024

Last day to drop without a mark of "W" and receive a refund: Friday, January 26, 2024

Last day to withdraw without a "W" on transcript or change to letter grade: Friday, February 23, 2024

Last day to drop with a mark of "W": Friday, April 5, 2024

Last day of classes: Friday, April 26, 2024

End of session: Wednesday, May 8, 2024

Class Holidays:

Monday, January 15th – Martin Luther King, Jr. Day

Monday, February 19th – President's Day

Monday, March 11th – Spring Recess

Prerequisite(s): PPD 640 Climate, Sustainability, and Environmental Planning

Course Description

This course focuses on methods and tools to assess and plan for urban sustainability as well as practices for monitoring and tracking progress towards sustainability outcomes. We will approach this course from a practitioner's perspective – using real world examples and best practices used in cities, counties, and public agencies. Students will examine sustainability approaches to a diverse set of environmental challenges across multiple sectors and through the framework of climate action and adaptation planning. Specific methodologies and tools include GHG inventories and accounting, geographic information systems, needs assessments, forecasting, cost-benefit comparisons, vulnerability assessments, predictive modeling, and multi-scenario analyses. Each class will address equity concerns as well as best practices for advancing equity within sectoral sustainability actions.

The course is designed around three modules that address:

1. Module 1: Methodologies and Methods for Urban Sustainability
2. Module 2: Understanding Triple Bottom Line (TBL) and Lifecycle Assessment Tools
3. Module 3: Practices in Urban Sustainability and Public Policy – Tools and Framework

Learning Objectives

On completion of the course, the students shall demonstrate:

- An understanding of and capacity to reflect upon a range of assessment and planning methods for urban sustainability
- An understanding of how the choice and use of theory, approach and methods have implications for the full planning process
- An understanding of how sustainability policies and methods impact the equitable distribution of benefits and resources for climate planning and adaptation
- A working understanding of various approaches to sustainability and climate planning based on the study of real-world examples and practices
- A particular understanding of systems analysis and spatial analysis, including assumptions and principles, especially as related to climate change planning
- Discuss and justify various methodological approaches, concrete methods, and various types of data
- Create and present both in written and oral forms a coherent approach for applying several methods for urban sustainability, and to assess the implications of various methodological choices
- Select and implement appropriate methods for various aspects of urban sustainability, discuss data and evaluate results
- Analyze complex sustainability issues using various methods and tools (e.g., vulnerability or life-cycle analysis)
- Work constructively in a team and communicate effectively with people from other disciplines.

Required Readings and Supplementary Materials

All required and additional class readings are available on the course Blackboard site.

Description and Assessment of Assignments

Evaluation for the course will be based on the following components.

In-Class Work/Participation (10%)

Students are expected to attend classes, and complete assigned readings for the week before class meetings to actively engage in discussions and activities. Attendance alone will not suffice – students are expected to come prepared to ask questions, participate in a facilitated discussion, offer ideas, and link materials across classes to demonstrate an understanding of course materials and objectives. Students are also expected to engage in Blackboard discussions and assignments.

Group Class Facilitation and Reflection Papers (30%)

Students will be organized into small groups (4-5 students). Each week a student group will be responsible for:

- 1) Providing an individual written summary (3 pages) of the readings assigned, addressing the following:
 - a) What about the readings was most compelling to you
 - b) Common themes and connections between readings
 - c) Subject matter ability to impact environmental justice
 - d) Topics in the reading where cities can uniquely lead
 - e) Challenges to approaches with justification
- 2) A group-facilitated discussion on the class readings and lecture (30 min):

- a) Provide at least 2-3 anticipated discussion questions on the Blackboard site by 10am on the Friday before class;
- b) Lead the class in a discussion, using discussion questions, interactive tools, and/or breakout exercises; and
- c) Discuss examples of methods and tools used within the sustainability topic area.
- d) Groups must provide an outline of their planned discussion by email to the instructors by 10am on the Friday before class.

Each group will lead the class twice during the semester with another group acting as a Review Committee. Written assignments must be turned in by 10am the Friday before class. No late assignments will be accepted unless prior arrangements have been made with the instructors.

Group Project (45%)

The purpose of the Team Project is to research and analyze real-world city sustainability approaches, provide your recommendations for opportunities for leadership that address climate adaptation and mitigation, resilience, and equity, and advise on best strategies to advance stakeholder engagement and support. Each Team is encouraged to incorporate all the topics discussed throughout the semester and to analyze the methodologies/tools to determine if the approaches for sustainability could have been improved and perhaps have been more successful if they had been implemented differently. You should challenge the approaches and methodologies and present improvements and justification for those changes. The goal is to improve sustainability policies so that they are more effective and beneficial to people and the environment.

A group will be composed of 4-5 students. The Group Project's grade will be based on three elements: (1) Project Proposal (10%), (2) 15 page Written Report, double spaced Arial 12, including infographics (15%), (3) Final Presentation (20%). Groups or individuals will verbally pitch Team Project ideas in class on February 5th in class and will receive feedback from the Professor and their classmates. Final Group Project Proposals are due Friday, February 23rd (12 noon). Progress on the assignment will be discussed in each class. Final Presentations will be held during the last 2 scheduled classes, and the Written Report will be due Friday, May 8th (9pm). A grading matrix will be posted on the Blackboard site.

Assignment:

Opportunities for Leadership: Compare and Contrast Two Cities

1. Team Project Proposal (10%/45%):

Once teams are formed, each group will turn in a proposal outlining their chosen project topic, a preliminary list of references/data sources you will be drawing on in your project, a project timeline, and team assignments for the remainder of the semester.

2. Team Project Written report (15%/45%):

- a. Governance structure and local authority over infrastructure and resources
- b. GHG footprint and top climate vulnerabilities
- c. Analyze four sustainability strategies each of your cities are currently pursuing or that you believe they should and make the case why that city is uniquely positioned to lead on that issue; including any necessary policy changes and program development, data needs, further analysis, etc.
 - i. two of your strategies should focus on climate mitigation (within two different sectors)
 - ii. two of your strategies should focus on climate resilience (within two different sectors)
- d. Evaluate how each suggested strategy will or will not advance equity;
- e. Include actions that would empower local residents to engage and be part of the process and outcomes

2. Team Project Presentation (20%/45%): Each team will present a public campaign. This output can be an infographic, poster, brochure, audio/video recording, website, zine, etc. Students are encouraged to think creatively in finding a format that best fits their chosen topic.

a. Choose one of your cities and pitch the public on the strategies analyzed in the paper, specifically addressing:

- i. Relative impact of the policies on stated climate and sustainability goals
- ii. Effectiveness of metrics used to measure progress
- iii. Impact on Environmental Justice
- iv. Cost-Benefit review
- v. Recommended process for stakeholder engagement and buy-in

3. Final Exam (15%)

Grading Breakdown

Assessment Tool (assignments/activities)	% of Grade
In-Class Work/Participation	10%
Reflection Papers	30%
Team Project Proposal	10%
Team Project Written Report	15%
Team Project Presentation	20%
Final Exam	15%
TOTAL	100%

Grading Scale

Course final grades will be determined using the following scale:

Letter grade	Corresponding numerical point range
A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Assignment Submission Policy

The submission, grading, and return of all assignments will be through Blackboard unless otherwise noted in this syllabus. Any changes to submission dates will be made in class and electronically (via email or Blackboard announcement).

Course Specific Policies

Students are expected to submit all assignments by the established deadline listed in the Course Schedule. Students who miss deadlines due to valid, extenuating circumstances

may submit the required work at an agreed-upon date. Students should contact me to arrange a discussion within one week of the missed deadline. Late assignments (without approved extensions) will receive a 5% deduction for each day of late submission, with no credit given if submitted more than one week past the deadline. Incomplete projects will be evaluated in relation to their degree of completion.

Attendance

Students are expected to be in class each week during the semester. In the event of an absence, students should notify the instructor of their absence as soon as they are able to work out a plan for getting caught up on content and making up any missed assignments to compensate for the absence. Please do not attend class in person if you are experiencing any possible Covid-19 symptoms. Students who are required to quarantine may be offered an opportunity to log in via Zoom when feasible. Students participating via Zoom should not expect full participation in class discussions nor active engagement with the instructor.

Zoom Etiquette

Zoom will be used for office hours as necessary and as a secondary option for disseminating course content in the case of emergencies.

Community Agreement - Classroom Norms

Classroom norms describe the behaviors that are encouraged and discouraged during class.

Students are expected to attend all weekly class sessions and engage in class discussions. In order to facilitate the best learning experience, students should complete all assignments and readings for a given session before class begins so as to allow for an informed discussion of the material. For your own learning and the learning of your classmates, you are expected to come to class prepared and energized to be an active class participant. That is, ask questions, request clarifications, discuss the material, complete in-class activities, and link material across readings, lectures, and topics.

We are all responsible for ensuring that this class is a supportive environment for everyone. No space is automatically safe for people because of our different backgrounds and knowledge. We must not just be aware of this but also be sensitive to how this will shape our class environment throughout the semester. I expect that all students will contribute to creating a safe space for everyone during our class lectures. As the instructor, I will work to support discussions that are respectful and engage critically with our course material. I will NOT support discussions that are deemed disrespectful and purposefully tangential to the material and will immediately shut down any inappropriate discussions. If you would like to be referred to by a name and/or pronoun that is different than how you are identified in the official roster, please let me know. I will do my best to ensure that your fellow classmates and I address you as preferred.

The following classroom norms are set for this community.

- The primary commitment is to learn from each other. We acknowledge differences among us in disciplines, experiences, interests, and values.
- Build on one another's comments; work toward shared understanding.
- If you wish to challenge something that has been said, challenge the idea or the practice referred to, not the individual sharing this idea or practice.
- Keep the tone and words respectful and productive.
- Allow others a chance to participate; empower yourself to participate.
- Maintain one another's confidence. We want to create an atmosphere for open, honest exchange.

- Do not write or say anything that would be compromising if it were made public.

Academic Integrity

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Artificial Intelligence (AI) is not permitted

Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups. Students may not have another person or entity complete any substantive portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

	Topics/Activities	Readings	Assignments/Deliverables
Week 1: Monday, Jan 8	<p>Class Plan Introductions and Opener; Overview of Public Policy and Urban Sustainability Nexus</p> <p>Class Protocol and Team Project Planning</p> <p>Roles and Responsibilities in Urban Sustainability</p> <p>Current Regulations, Policies and Governance</p> <p>Environmental, Social and Governance (ESG)</p> <p>Macro and Micro Sustainability</p> <p>Urban Experimentation</p>	<p>Required Readings</p> <p>Articles: Just urban futures? Exploring equity in “100 Resilient Cities” Joanne Fitzgibbons ↑, Carrie L. Mitchell, School of Planning, University of Waterloo, 200 University Ave. W., Waterloo, ON N2L 3G1, Canada</p> <p>Transition towards and of sustainability—Understanding sustainability as performative Anette Hallin, Tina Karrbom-Gustavsson and Peter Dobers4</p> <p>Your Sustainability Is Not My Sustainability: In-between Spaces for Meaningful Collaboration between Local Stakeholders and Planning Professionals to Construct Congruent Frames over Contested Meanings, Selina Abraham, Department of Political Science, Amsterdam Institute for Social Science Research (AISSR), University of Amsterdam, 1018 WV Amsterdam, The Netherlands; s.abraham@uva.nl</p> <p>Book: Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 1: Conceptualizing, Planning, and Implementing Sustainability in US Cities pg 1-25)</p> <p>Optional Readings Creating City Portraits: A methodological guide from the Thriving Cities Initiative, C40 (including video “Downscaling the Doughnut to the City”), July 2020</p>	<p>Get started on Readings/ Assignments for Week 1 and 2</p> <p>Assignments Reflection Paper 2 (from week 1 and 2) (upload to Blackboard by noon on Friday, Jan 19)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Jan 19)</p>

Module 1: Methodologies and Methods for Urban Sustainability			
Week 2 Monday, Jan 15	Martin Luther King Jr. Day - No Class	Required Readings	No assignment due
Week 3 Monday, Jan 22	Environmental Methodologies for Urban Sustainability Human and Natural Systems Land Use Strategies Community Engagement and Environmental Justice Climate Action – Adaptation, Transformation, and Mitigation Group Presentations on Reading Assignments with Group Committee Review State & Local Planning Strategies Discuss Case Studies Team Project Planning	Required Readings Articles: From XS to XL Urban Nature: Examining Access to Different Types of Green Space Using a 'Just Sustainabilities' Framework Dong-ah Choi 1 , Keunhyun Park 2 and Alessandro Rigolon 1 Justice in nature-based solutions: Research and pathways , Joshua J. Cousins, Department of Environmental Studies, State University of New York College of Environmental Science and Forestry, 1 Forestry Drive, Syracuse, NY 13210, USA Urban sustainability: is densification sufficient? Petter Næss, Inger-Lise Saglie & Tim Richardson Book: Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton- Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 4: Climate pg 97-128 and Chapter 8 Urban Green Space pg 239-272)	Assignments Reflection Paper 1 (upload to Blackboard by noon on Friday, Jan 26) Submit Team Project Ideas (upload to Blackboard by noon on Friday, Jan 26) Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Jan 26)

<p>Week 4 Monday, Jan 29</p>	<p>Social and Community Methodologies for Urban Sustainability</p> <p>Human and Social Systems</p> <p>Community Engagement and Social Justice</p> <p>The Problem with Gentrification</p> <p>Discuss Team Project Ideas</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Advancing Social Challenges in Urban Sustainability</p> <p>Video Presentation and Break-out Groups</p> <p>State & Local Planning Strategies</p> <p>Discuss Case Studies</p> <p>Team Project Planning</p>	<p>Required Readings</p> <p>Articles:</p> <p>Integrating environmental sustainability and social justice in housing development: two contrasting scenarios Silvia Mete *, Jin Xue Department of Urban and Regional Planning, Norwegian University of Life Sciences, Fredrik Dahls vei 15, 1430 Ås, Norway</p> <p>Urban sustainability and justice – just sustainabilities and environmental planning by Vanesa Castán Broto and Linda Westman, London, Zed Books Ltd, 2019, 208 pp., 65 Pounds, ISBN: 978-1-78699-492-9</p> <p>Social Sustainability: A New Conceptual Framework, Efrat Eizenberg and Yosef Jabareen, Faculty of Architecture and Town Planning, Technion, Israel Institute of Technology</p> <p>Book:</p> <p>Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 2: Equity pg 29-56)</p>	<p>Assignments</p> <p>Reflection Paper 2 (upload to Blackboard by noon on Friday, Feb 2)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Feb 2)</p> <p>Team Project Proposal (upload to Blackboard by noon on Friday, Feb 2)</p>
---	--	--	---

<p>Week 5 Monday, Feb 5</p>	<p>Economic Methodologies for Urban Sustainability</p> <p>Community Engagement and Financing Systems</p> <p>Monetizing Environmental Commodities</p> <p>Circular Economy Framework</p> <p>Each Team will Verbally Pitch Team Project Proposals</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Video Presentation and Break-out Groups</p> <p>Guest Speaker on Urban Sustainability</p> <p>Discuss Case Studies</p> <p>Team Project Updates</p>	<p>Required Readings</p> <p>Articles:</p> <p>Constructing the narrative of the sustainability fix: Sustainability, social justice and representation in Austin, TX, Joshua Long, Southwestern University, USA</p> <p>Revisiting urban sustainability from access to jobs: Assessment of economic gain versus loss of social equity, Mengbing Dua,b, Mengxue Zhaoa, Yang Fuc,*</p> <p>Justice and power relations in urban greening: can Lisbon’s urban greening strategies lead to more environmental justice? Jessica Verheij & Mafalda Corrêa Nunes, 26:3, 329-346, DOI: 10.1080/13549839.2020.1801616</p> <p>Book:</p> <p>Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 3: Economic Sustainability pg 61-91)</p>	<p>Assignments</p> <p>Reflection Paper 3 (upload to Blackboard by noon on Friday, Feb 9)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Feb 9)</p>
<p>Module 2: Understanding Triple Bottom Line (TBL) and Lifecycle Assessment Tools</p>			

<p>Week 6 Monday, Feb 12</p>	<p>Triple Bottom Line (TBL) in practice</p> <p>Implementing and using TBL in practice</p> <p>Moving Beyond Sustainability</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Case Studies on TBL</p> <p>Video Presentation and Break-out Groups</p> <p>Group Project Updates</p>	<p>Required Readings</p> <p>Articles: Sustainable Development of Smart Cities Based on the Context of the triple bottom line: A Systemic Literature Review, American Psychological Association (APA): Franco, L. S., Franco, A. C., Doliveira, S. L. D., Maganhotto, R. F., & Magni, C. (2022),</p> <p>Industry 4.0 and sustainable development: A systematic mapping of triple bottom line, Circular Economy and Sustainable Business Models Perspectives, Iqra Sadaf Khan a, *, Muhammad Ovais Ahmad b, Jukka Majava, University of Oulu, Finland</p> <p>Book: Green HRM: A Climate-Conscious Route to Triple Bottom Line, Soni Agrawal & Roma Puri (Chapter 1 People, Planet and Profit pg 1-21, Chapter 2 Cultivating Green Culture pg 25-42, and Chapter 3 Disruptive and Sustainable Business Models pg 49-73)</p> <p>Optional Readings Evaluation of city sustainability using multi-criteria decision-making considering interaction among criteria in Liaoning province China, Yang Chena,*, Danning Zhang, <i>School of Business Administration, Northeastern University, Shenyang, 110167, China</i></p>	<p>Assignments</p> <p>Reflection Paper 4 (upload to Blackboard by noon on Friday, Feb 23)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Feb 23)</p> <p>Final Team Project Proposal (upload to Blackboard by noon on Friday, Feb 23)</p>
<p>Week 7 Monday, Feb 19</p>	<p>President's Day - No Class</p>	<p>Required Readings</p> <p>Article: Social life cycle assessment of adaptive reuse, Rebecka Lundgren, Faculty of Engineering, Lund University, Lund, SE</p>	<p>No Assignments Due</p>

<p>Week 8 Monday, Feb 26</p>	<p>Sustainable Lifecycle Assessments (SLCAs) in practice</p> <p>LCA for Climate Adaptation and Disaster Planning</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Climate Resilience</p> <p>Video Presentation and Break-out Groups</p> <p>Guest Speaker on Climate Action & Adaptation</p> <p>Team Project Updates</p>	<p>Required Readings</p> <p>Articles:</p> <p>Sustainability spillover effects and partnership between East Asia & Pacific versus North America: interactions of social, environment and economy Mehrab Nodehi¹ · Abbas Assari Arani² · Vahid Mohamad Taghvaei², Accepted: 27 September 2021 / Published online: 23 October 2021</p> <p>Adapting for shared use – evaluating the lifecycle carbon impact, Rebecka Lundgren et al 2023 IOP Conf. Ser.: Earth Environ. Sci. 1196 012038</p> <p>An extended environmental input–output lifecycle assessment model to study the urban food–energy–water nexus, John Sherwood et al 2017 Environ. Res. Lett. 12 105003</p> <p>Life Cycle Assessment G Finnveden, KTH Royal Institute of Technology, Stockholm, Sweden, J Potting, Wageningen University, Wageningen, The Netherlands; and KTH Royal Institute of Technology, Stockholm, Sweden, 2014 Elsevier Inc.</p>	<p>Assignments</p> <p>Reflection Paper 5 (upload to Blackboard by noon on Friday, Mar 1)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Mar 1)</p>
---	---	--	--

<p>Week 9 Monday, Mar 4</p>	<p>Sustainable Lifecycle Assessments (SLCAs) in practice (cont.)</p> <p>Analysis of Inputs and Outputs for Action Planning</p> <p>Isolating major issues in Cities – Strategies and Practices for Sustainability</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Group Discussion on Traffic Congestion and Negative Impact on Quality of Life (QoL)</p> <p>Role of infrastructure and planning in creating sustainable cities</p> <p>Group Project Updates</p>	<p>Required Readings</p> <p>Articles:</p> <p>The value of analytic diversity in urban and sustainability studies, David J. Hess (2022) The value of analytic diversity in urban and sustainability studies, Local Environment, 27:3, 267-271, DOI: 10.1080/13549839.2022</p> <p>The Sustainability Dimensions in Intelligent Urban Transportation: A Paradigm for Smart Cities Lorena Reyes-Rubiano 1 , Adrian Serrano-Hernandez 1,* , Jairo R. Montoya-Torres 2 and Javier Faulin</p> <p>Lifecycle Applications of Building Information Modeling for Transportation Infrastructure Projects, Ethan J. Belcher and Yewande S. Abraham * Department of Civil Engineering Technology Environmental Management and Safety, Rochester Institute of Technology, Rochester, NY</p> <p>Optional Readings</p>	<p>Assignments</p> <p>Reflection Paper 6 (upload to Blackboard by noon on Friday, Mar 15)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Mar 15)</p>
<p>Week 10 Monday, Mar 11</p>	<p>Spring Recess - No Class</p>	<p>No required readings</p>	<p>No assignments due</p>
<p>Module 3: Practices in Urban Sustainability and Public Policy – Tools and Framework</p>			

<p>Week 11 Monday, Mar 18</p>	<p>The Future of Energy</p> <p>The Energy Crisis</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Planning for Renewable Energy and Energy Resilience</p> <p>Transportation Electrification</p> <p>Guest Speaker on Energy</p> <p>Waste, Water and Energy Nexus</p> <p>Discuss Case Studies</p> <p>Team Project Updates</p>	<p>Required Readings</p> <p>Articles:</p> <p>Sustainable conditions for the development of renewable energy systems: A triple bottom line perspective, Laura Visintainer Lerman a, Guilherme Brittes Benitez a, Wolfgang Gerstlberger b, Vinícius Picanço Rodrigues c, Alejandro G. Frank, Organizational Engineering Group</p> <p>Hybrid smart grid with sustainable energy efficient resources for smart cities, Muhammad Ibrahim Khalil a, N.Z. Jhanjhi b, Mamoona Humayun c, SivaKumar Sivanesan b, Mehedi Masud d, M. Shamim Hossain</p> <p>A systematic review of the smart energy conservation system: From smart homes to sustainable smart cities, Hakpyeong Kim, Heeju Choi, Hyuna Kang, Jongbaek An, Seungkeun Yeom, Taehoon Hong Department of Architecture and Architectural Engineering, Yonsei University, Seoul, 03722, Republic of Korea</p> <p>Book:</p> <p>Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 6: Energy pg 167-195)</p> <p>Optional Readings</p> <p>DIGITAL TWIN SOLUTION IMPLEMENTED ON ENERGY HUB TO FOSTER SUSTAINABLE SMART ENERGY CITY, CASE STUDY OF SUSTAINABLE SMART ENERGY HUB A.Dulaimi1 *, R. Hamida1, M. Naser 1, M.</p>	<p>Assignments</p> <p>Reflection Paper 7 (upload to Blackboard by noon on Friday, Mar 22)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Mar 22)</p>
--	---	---	--

		Mawed21 Enova by Veolia, Dubai, UAE - (adulaimi, rhamida,mazen.nasr)@enova- me.com2 Heriot-Watt University, Dubai Campus, UAE	
--	--	---	--

<p>Week 12 Monday, Mar 25</p>	<p>Water and Waste – Consumption vs 3Rs</p> <p>The Water Crisis</p> <p>The Waste Problem</p> <p>Sustainable Supply Chains and Circular Economies</p> <p>Guest Speaker on Sustainability Planning</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Video Presentation and Group Discussion</p> <p>Discuss Case Studies</p> <p>Team Project Updates</p>	<p>Required Readings</p> <p>Articles: Urban water reuse: A triple bottom line assessment framework and review, Jonathan Wilcoxa, Fuzhan Nasirib,*, Sarah Bellc, Md. Saifur RahamanbaBartlett Faculty of the Built Environment, University College London (UCL), London, UKbDepartment</p> <p>Advancing the Application of a Multidimensional Sustainable Urban Waste Management Model in a Circular Economy in Mexico City, Antonio Jacintos Nieves 1 and Gian Carlo Delgado Ramos 2, Ecology Institute, Sustainability Sciences Programme, National Autonomous University of Mexico (UNAM)</p> <p>Book: Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 7: Water pg 203-233 and Chapter 9: Waste pg 281-308)</p> <p>Optional Readings Lifecycle operational resilience assessment of urban water distribution networks, Wei Liua,b, Zhaoyang Songb, Min Ouyangc,d, a State Key Laboratory of Disaster Reduction in Civil Engineering, Tongji University, Shanghai 200092, PR China Department of Structural Engineering, Tongji University, Shanghai 200092, PR China</p> <p>An Innovative Scheme to Confront the Trade-Off Between Water Conservation and Heat Alleviation With Environmental Justice for Urban Sustainability:</p>	<p>Assignments</p> <p>Reflection Paper 8 (upload to Blackboard by noon on Friday, Mar 29)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Mar 29)</p>
--	---	--	--

		<p>The Case of Phoenix, Arizona Yuanhui Zhu¹ , Soe W. Myint^{1,2} , Xin Feng³ , and Yubin Li⁴</p> <p>Circular economy practices in the built environment Tuomo Joensuu* , Harry Edelman, Arto Saari Tampere University, Faculty of Built Environment, Construction Management and Economics Research Group, P.O. Box 600, FI, 33101, Tampere, Finland</p>	
<p>Week 13 Monday, Apr 1</p>	<p>Sustainability Visions for Urban Environments</p> <p>Transportation and Traffic Congestion</p> <p>Video Presentation and Group Discussions</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p> <p>Case Studies</p> <p>Guest Speaker on Sustainability Vision</p> <p>Group Project Reviews – Final Check-In</p>	<p>Required Readings Articles: Just Transformations to Sustainability Nathan J. Bennett ^{1,2,3,*} , Jessica Blythe ⁴ , Andrés M. Cisneros- Montemayor ^{1,5} , Gerald G. Singh ^{1,5} and U. Rashid Sumaila ^{1,6}</p> <p>Urban sustainability responsibilities of the European planning profession in the next decades, Peter Naess (2023) Urban sustainability responsibilities of the European planning profession in the next decades, European Planning Studies, 31:11, 2342-2353</p> <p>Book: Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton- Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 5: Transportation pg 133-160)</p>	<p>Assignments Reflection Paper 9 (upload to Blackboard by noon on Friday, Apr 5)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Apr 5)</p>

<p>Week 14 Monday, Apr 8</p>	<p>Group Discussion on Urban Sustainability and Public Policy</p> <p>Strategies for Equity and Equality</p> <p>Funding Urban Sustainability</p> <p>Best Practices in Urban Sustainability Planning and Public Policy</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p>	<p>Required Readings</p> <p>Articles: Urban greening: A new paradox of economic or social sustainability? T Mengbing Dua,c, Xiaoling Zhanga,b,* a Department of Public Policy, City University of Hong Kong, Kowloon, Hong Kong b Shenzhen Research Institute, City University of Hong Kong, Shenzhen, China</p> <p>Transformative capacity and local action for urban sustainability, Vanesa Castán Broto , Gregory Trencher, Ewa Iwaszuk, Linda Westman</p> <p>Contesting Sustainability: ‘SMART Growth’ and the Redevelopment of Austin’s Eastside, Eliot M. Tretter, Volume 37.1 January 2013 297–310 International Journal of Urban and Regional Research DOI:10.1111/j.1468-2427.2012.01166.x</p> <p>Book: Urban Sustainability in the US Cities Take Action Keeley, Melissa. author.; Benton-Short, Lisa. author. Cham : Springer International Publishing : Imprint: Palgrave Macmillan; 2019 (Chapter 10: Summary and Best Practices pg 313-316)</p>	<p>Assignments</p> <p>Reflection Paper 10 (upload to Blackboard by noon on Friday, Apr 12)</p> <p>Group Discussion Questions/Topics (upload to Blackboard by noon on Friday, Apr 12)</p>
<p>Week 15 Monday, Apr 15</p>	<p>Final Exam Topics review</p> <p>Prep for Team Project Presentations</p> <p>Group Presentations on Reading Assignments with Group Committee Review</p>	<p>No required readings</p>	<p>Assignments</p> <p>Team Project Written Report (upload to Blackboard by noon on Friday, Apr 19)</p>

Week 16 Monday, Apr 22	Team Project Presentations	No required readings	Team Project Presentations Due
Week 17 Study Days Apr 27 - 30	Team Project Presentations	No required readings	Team Project Presentations Due
Week 18 FINAL Monday, May 6	Final Exam		

Statement on Academic Conduct and Support Systems

Academic Integrity:

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, compromises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to

be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.