

Wayne State University
Department of Urban Studies & Planning
UP 4460: Sustainable Cities

Instructor: Allison Laskey (alasley@uci.edu)

Course Info: Winter 2019, 3 credits

Class Sessions: Tuesdays 11:30am to 2pm at 0174 Main

Office Hours: Tuesdays after class or by appointment

Format: Discussion-based seminar; readings will be posted each week, as syllabus may change

Course Description

We live in an increasingly urban world. According to the UN, since 2008 over 50% of humans are urban-dwellers. At the same time, humans are impacting the global environment at an unprecedented scale. Through the lens of the planner's triangle, this course explores the ways in which people and their urban developments affect the environment, the way the natural world impacts cities, and how cities may be developed and redeveloped to create a more just, green, and prosperous urban future.

Learning outcomes

After taking this course, students will be able to:

- Recognize the opportunities and challenges urban development presents for sustainable development.
- Understand the particular impacts of climate change on cities, with consideration for uneven impacts globally.
- Understand the possibilities technology affords for improving sustainability in cities.
- Discuss the equity implications of different urban sustainability and development decisions and policies.
- Evaluate a city's level of sustainability across several dimensions.

Course Requirements

- (25%) In-class participation, including 1 presentation of an assigned reading
- (15%) Midterm project presentation -- Pick a city and do a presentation on their climate action plans and sustainability initiatives. Midterm can be individual or group. proposal mtg wk 3, due wk 4. 1 pg Reflection due wk 8.
- (20%) Final paper -- 10-15 pg. Recommend 3-5 readings in order to explain, what would you like people to know about sustainability? Proposal due wk 5. Revision due wk 10. Revision 2 due wk 12.
- (15%) Final presentation -- Presentation of final paper in class.
- (20%) weekly reading responses (blogpost)

- (5%) in-class writing assignments

Course Outline

1. What is sustainability? What does a sustainable city look like?

Week 1: Current events to set the stage

- Nakamura, D. and Fears, D. (2018). Trump administration resists global climate efforts at home and overseas. *Washington Post*. December 9, 2018.
- Flowers, M. and Zeese, K. (2018). Governments' Failures on Climate Spur New Actions. *Popular Resistance*. November 25, 2018.
- CBS News. (2018). Paris braces for renewed riots despite Macron's fuel tax surrender. December 6, 2018.
- Sanders, B. (2018). Republican Mayor Leads 100% Renewable City. Facebook. <https://www.facebook.com/senatorsanders/videos/328676867966319/>
- [Read in class] Burke, K. D., Williams, J. W., Chandler, M. A., Haywood, A. M., Lunt, D. J., & Otto-Bliesner, B. L. (2018). Pliocene and Eocene provide best analogs for near-future climates. *Proceedings of the National Academy of Sciences*, 201809600. <https://www.pnas.org/content/early/2018/12/05/1809600115>

What we will be studying this semester is newsworthy and immediately relevant, and it is not easy material to grapple with. This week will set the stage with current events in the news backed by science, to introduce the problems cities are facing in sustainability.

Week 2: How we got here and now

- Dayna Baumeister <https://www.youtube.com/watch?v=yI2s7yI6eDI> (especially 10:00-15:30; 16:20-20:00; and 21:30-25:45)
- Mitchell, T. (2009). Carbon democracy. *Economy and Society*, 38(3), 399-432. p. 1-12 (including endnotes).
- Klein, N. (2015). *This changes everything: Capitalism vs. the climate*. Simon and Schuster. (TOC and Introduction) or Tarr, J. (2014). *Urban environmental history* (pp. 72-89). In F. Uekoetter (Ed.), University of Pittsburgh Press.
- World commission on environment and development. (1987) "Towards sustainable development." from *Our common future*. Oxford: Oxford University Press. [video]

This week will introduce a brief ecological and geological history of the planet (Baumeister 2010) and introduce the fossil fuel era (Mitchell 2009) grown through a capitalist economy (Klein 2015). It will introduce the basis of global sustainability agreements through the Brundtland definition of sustainability (Our Common Future 1987).

Week 3: Urban theory today for cities past, present, and future

- Mitchell, T. (2009). Carbon democracy. *Economy and Society*, 38(3), 399-432. p. 12-25 (including endnotes).
- Roy, A. (2013). The 21st-century metropolis: new geographies of theory. In *The Futures of the City Region* (pp. 59-70). Routledge.
- [video - Burtynsky? 1605 movie?]

Rounding out our introduction to the fossil fuel era and beyond (Mitchell), we theorize how to think about cities on our planet today (Roy). A video will triangulate our visual relation to these themes.

Week 4: The three e's/the planner's triangle

- Campbell, S. (1996). Green cities, growing cities, just cities?: Urban planning and the contradictions of sustainable development. *Journal of the American Planning Association*, 62(3), 296-312.
- Agyeman, J., Bullard, R. D., & Evans, B. (2002). Exploring the nexus: Bringing together sustainability, environmental justice and equity. *Space and Polity* 6(1), pp. 77-90.
- Mitchell, Timothy. *Carbon democracy: Political power in the age of oil*. Verso Books, 2011. (conclusion).

A framework for sustainability in planning guides our analytic of sustainable cities (Campbell). The particular challenge of environmental racism must be part of that reckoning (Agyeman, Bullard & Evans 2002), as must the imminent close to the era of cheap fossil fuels (Mitchell).

Week 5: Cities and climate change [Carolyn Loh guest professor]

- Solecki, W., Rosenzweig, C., & Hammer, S. (2013). Urbanization of climate change. *The Urban Transformation: Health, Shelter and Climate Change*, 197.
- City of Chicago. 2008. Climate Change Action Plan.
- The Energy and Resources Institute. (2014). Maharashtra State Adaption Action Plan on Climate Change.
<http://www.moef.gov.in/sites/default/files/Maharashtra%20Climate%20Change%20Final%20Report.pdf>
- Johnson, C., Toly, N., & Schroeder, H. (Eds.). (2015). Introduction. *The urban climate challenge: rethinking the role of cities in the global climate regime* (Vol. 4). Routledge.
- The World Bank, *Urban Risk Assessment – An Approach for Understanding Climate & Disaster Risk in Cities*, 2012, Chapter 1 & 2: Pages 5-33.
<http://elibrary.worldbank.org/content/book/9780821389621>

Guest Professor Carolyn Loh will report on her research and equip us to compare sustainability plans across cities.

Week 6: Revealing disproportionate burdens

- Senier, S., Lioi, A., Ryan, M. K., Vasudevan, P., Nieves, A., Ranco, D., & Marshall, C. (2014). The Resilience of Race: A Cultural Sustainability Manifesto. *Resilience: A Journal of the Environmental Humanities*, 1(2).
- Tsing, A.L. (2015). A Feminist Approach to the Anthropocene: Earth Stalked by Man. Helen Pond McIntyre '48 Lecture. November 10, 2015. Barnard Center for Research on Women. https://www.youtube.com/watch?v=ps8J6a7g_BA.
- LaDuke, W. (2017). *All our relations: Native struggles for land and life*. Haymarket Books. (Introduction).

Since unsustainability was achieved by enforcing structural inequalities, we view theories dealing with racism, sexism, and settler colonialism as integral to building sustainable cities.

Week 7: Midterm presentations -- City sustainability plans and climate initiatives

2. Generating sustainable cities

Week 8: Ecological systems and waste

- Leonard, A. (2009). *The Story of Stuff*. Tides Foundation, Funders Workshop for Sustainable Production and Consumption, and Free Range Studios. <https://www.youtube.com/watch?v=9GorqroigqM&vl=en>
- Mollison, B. (1988). *Permaculture: a designer's manual*. Permaculture: a designer's manual. (Selections)
- Millennium Development Goal #11: Sustainable cities and communities. United Nations Development Programme. <http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-11-sustainable-cities-and-communities.html>
- United for a Clean City: Peruvian recyclers combat the impact of waste on the environment and on people's health. August 8, 2017. <https://stories.undp.org/united-for-a-clean-city>
- A tidal wave of plastic. <https://feature.undp.org/plastic-tidal-wave/#article>
- Hoffman, M.J. and Tyler, C. (2018) Where Does All the Microplastic Trash in the Great Lakes Go? *Inverse*. August 20, 2018. <https://www.inverse.com/article/48237-great-lakes-microplastic-pollution>

This week helps us think through supply chains of the materials economy (Leonard) in proximity to Earth ecology (Mollison). We examine the case study of plastic accumulation in cities, lakes, and oceans.

Week 9: Extreme weather, natural disasters, and uneven socioeconomic impacts

- Klinenberg, E. (2015). *Heat wave: A social autopsy of disaster in Chicago*. University of Chicago Press. (excerpts)
- Moskowitz, P. (2017). *How to kill a city: Gentrification, inequality, and the fight for the neighborhood*. Hachette UK. (New Orleans excerpts)
- The Reality of Climate Change: The Quiet After the Storm. United Nations Development Programme.
<http://www.undp.org/content/undp/en/home/ourwork/ourstories/the-quiet-after-the-storm.html>
- Samenow, J. (2018). Polar vortex could unleash winter wallop by January. *Washington Post*. December 12, 2018.
https://www.washingtonpost.com/weather/2018/12/17/polar-vortex-could-unleash-winter-wallop-by-january/?utm_term=.598c749060f7
- Livingston, Ian. (2018). 'Stay well back ... or risk certain death': Giant waves slam California coast. *Washington Post*. December 17, 2018.
https://www.washingtonpost.com/weather/2018/12/17/stay-well-back-or-risk-certain-death-giant-waves-slamming-california-coast/?utm_term=.756651999e09

We take two case studies of the uneven effects extreme weather has had on U.S. cities: Chicago and New Orleans, then consider intensifying news about extreme weather near and far.

Week 10: Land and green building

- Schilling, J., & Logan, J. (2008). Greening the rust belt: A green infrastructure model for right sizing America's shrinking cities. *Journal of the American Planning Association*, 74(4), 451-466.
- Angelo, H., & Vormann, B. (2018). Long waves of urban reform: Putting the smart city in its place. *City*, 1-19.
- John Liu (2011) *Restoration Writ Large: Unleashing the Potential of Nature and People for Large-Scale Ecosystem Restoration*. Bioneers.
<https://vimeo.com/31524262>
- Center for Neighborhood Technology. (2015). *A RainReady Nation: Protecting Homes and Businesses in a Changing Climate*.
https://www.cnt.org/sites/default/files/publications/CNT_RainReadyNation_0.pdf

This week we consider city-scale sustainability efforts and strategies for green building.

Week 11: Water delivery, control, and privatization

- Sadiq, S. *Timeline: Cochabamba Water Revolt*. PBS.
<http://www.pbs.org/frontlineworld/stories/bolivia/timeline.html>

- We the People of Detroit Research Collective. Mapping the Water Crisis. <https://wethepeopleofdetroit.com/communityresearch/water/>
- Clark, A. (2018). *The Poisoned City: Flint's Water and the American Urban Tragedy*. Metropolitan Books. (excerpts)
- Btselem. https://www.btselem.org/video/201609_water_salem
- The LA Aqueduct at 100. *LA Times*. <http://graphics.latimes.com/me-aqueduct/>

The first cities were located by a water source, and cities expanded according to water infrastructure. Modern water infrastructure has allowed unprecedented urban growth but is now facing old age, tightening budgets, and resource conflicts with public health implications.

Week 12: Transportation and connectivity

- Bajpai, Jitendra N., "Emerging Vehicle Technologies and the Search for Urban Mobility Solutions", *Journal of Urban, Planning & Transport Research*, Vol. 4, 2016, Issue 1
- Miller, T. R., & Lubitow, A. (2014). *The Politics of Sustainability: Contested Urban Bikeway Development in Portland, Oregon*. *Incomplete Streets: Processes, Practices, and Possibilities*, 266.
- Starosielski, N. (2012). 'Warning: do not dig': negotiating the visibility of critical infrastructures. *Journal of Visual Culture*, 11(1), 38-57.

Today's cities rely on fast flows of goods, people, and information. We examine mobility infrastructures for vehicles (Bajpai), bikes (Miller & Lubitow), and the internet (Starosielski).

Week 13: Residential inclusion and civic participation

- Harker, D. and E. Ungar Natter. (1995). *Where We Live: A Citizen's Guide to Conducting an Environmental Inventory*. New York: Island Press. (excerpts)
- Roy, A. (2003). Paradigms of propertied citizenship: Transnational techniques of analysis. *Urban Affairs Review*, 38(4), 463-491. (excerpts)
- LaDuke, W. (2005). "Recovering the Power to Slow Climate Change" in *Recovering the sacred: The power of naming and claiming*. South End Press.

The call for sustainability requires active citizen participation. Where and how can individuals affect large scale socioeconomic systems?

Week 14: Health, wealth, and sustainable city design

- Corburn, J. (2009). Chapter 6: Healthy Urban Development. *Toward the healthy city: people, places, and the politics of urban planning*. Cambridge: MIT Press.
- Moskowitz, P. (2017). *How to kill a city: Gentrification, inequality, and the fight for the neighborhood*. Hachette UK. (Chapter 11)
- Planet Earth II Cities episode (available on Netflix)

We contend with causes and solutions to public health and wealth disparities, remembering that cities are homes to wildlife as well as humans.

Week 15: Conclusion, final presentations