

**PLAN 3810/5810: Toward the Resilient City**

Wednesday, 1pm – 3:30pm  
Campbell Hall Rm 325

Instructor: Barbara Brown Wilson, PhD  
Office: Peyton House Rm 105; Office Hours: Wednesday 10am to 12pm  
e-mail: [bbwilson@virginia.edu](mailto:bbwilson@virginia.edu); t: 434.924.4779



**Course Description:**

What makes a city resilient? In the face of increasing climate change, it is evermore important to understand the impacts different types of development practices have on our globe and its inhabitants, and what avenues humans have to contribute to redressing our effects on the Earth. This course will consider the history, theory, and practice of sustainable design and development, with a focus on how the field is changing to see its cities as complex adaptive systems. Sustainability, resilience, regeneration, and other related concepts will be considered as socio-technical paradigms having political and physical manifestations. Critical case studies of innovative practice models (e.g. ecodistricts, urban agriculture, green infrastructure, living buildings, adaptive reuse) and methods (e.g. charrettes, sustainability indicators, life cycle analysis, regulatory frameworks) will inform our discussions. Students will be empowered to consider the implications of various practical applications,

and to develop their interdisciplinary creative problem-solving skills to help critically apply these techniques in practice.

**Course Requirements:**

In this course, we learn as actively and as collaboratively as possible through a combination lecture-seminar-workshop format. The readings will be extensive and you will be expected to come prepared and actively participate in class discussions.

All assignments will build toward a final creative project that allows you to apply your learning to a real-life issue on UVA Grounds in partnership with the Office of Sustainability.

For 3810 students, you will join a team that will develop a pitch for a strategy to implement one concept from the Living Building Challenge on Grounds.

For 5810 students, you will serve as a research consultant to one of the groups—helping your group understand the socio-technical challenges and opportunities of ideas identified by your peers, and then drafting a workshop curriculum to actively engage youth in exploring and understanding this topic more generally.

**Learning objectives** include:

- 1) developing your leadership skills in relationship to global and local sustainability efforts;
- 2) cultivating a systems perspective regarding the challenges of climate change and socio-environmental justice;
- 3) gaining a critical understanding of the impacts, opportunities, and limitations of various sustainable planning tactics; and
- 4) understanding the full range of actors contributing to an issue relevant to planning resilient cities.

Grading in the course will be based on the following: class attendance and participation, including posting weekly discussion questions about the readings on the collab forum (20%); a class presentation and 700-word review of a case study pertinent to the week’s topic (20%); a memo clearly explaining the state of the issue you will take on for your group project (10%); and final group project poster (30%). More information on each assignment will be posted in the Collab Assignments folder. Attendance is expected and more than an absence or two should be explained.

**Key Dates:**

State of the Issue Memo:	October 9 <sup>th</sup>
Video Storyboard:	October 30 <sup>th</sup>
Poster Concept:	November 20 <sup>th</sup>
Final Presentations:	December 4 <sup>th</sup>

**Readings:** Readings will be drawn from a variety of sources and made available on Collab

**Technology Policy:** The use of electronic devices can really affect our classroom dynamic and hinder our learning. In the Planning Department, use of electronic devices—laptops, tablets, and iphones—is not be permitted in unless explicitly requested by the instructor on specific days when they are needed for in-class work. Otherwise, such devices should not be in use during class time. Recording devices are exempt from this policy. Please see the following links:

<http://www.nytimes.com/2014/06/03/science/whats-lost-as-handwriting-fades.html> and

<https://www.washingtonpost.com/posteverything/wp/2014/12/30/this-year-im-resolving-to-ban-laptops-from-my-classroom/>.

**Accessibility:** This course is designed to be welcoming to, accessible to, and usable by everyone, including students who are English-language learners, have a variety of learning styles, have disabilities, or are new to online learning. Be sure to let me know immediately if you encounter a required element or resource in the course that is not accessible to you. Also, let me know of changes I can make to the course so that it is more welcoming to, accessible to, or usable by students who take this course in the future.

**Personal Statement from Professor:** I am here to help. If you find yourself broke, hungry, facing discrimination, depression, grief, chronic pain of any sort, or any problems that you need help with, please let me know. I know lots of campus resources, often have snacks in my office, and like to help other people. Also, if you'd like to provide us with anonymous feedback at any point in the semester, we've set up a feature for you to do that safely on our Collab site.

**Student Safety:** The University of Virginia is dedicated to providing a safe and equitable learning environment for all students. To that end, it is vital that you know two values that the faculty, the University, and we hold as critically important:

1. Power-based personal violence will not be tolerated.
2. Everyone has a responsibility to do their part to maintain a safe community on Grounds.

If you or someone you know has been affected by power-based personal violence, more information can be found on the [Office for Equal Opportunity and Civil Rights](#) website that describes reporting options and resources available and direct access to the Report and Incident tool.

As your professors, know that we care about your wellbeing and stand ready to provide support and resources as we can. As faculty members, we are "responsible employees," which means that we are required by University policy and federal law to report any violence to the University's Title IX Coordinator. The Title IX Coordinator's job is to ensure that the reporting student receives the resources and support that they need, while also reviewing the information presented to determine whether further action is necessary to ensure survivor safety and the safety of the University community. If you would rather keep this information confidential, there are Confidential Employees you can talk to on Grounds [http://www.virginia.edu/justreportit/confidential\\_resources.pdf](http://www.virginia.edu/justreportit/confidential_resources.pdf).

**Students in Distress:** Services for students in various forms of distress are offered by Counseling and Psychological Services (<https://www.studenthealth.virginia.edu/caps>) in the Elson Student Health Center. During evenings and weekends, emergency crisis assistance (434-972-7004) is available. In addition, if you are concerned about another student, call 434-243-5150 during business hours, and request the consulting clinician.

**Honor:** By enrolling in this course, you have agreed to abide by and uphold the Honor System of the University of Virginia. For more information, go to: <http://www.virginia.edu/honor/>

## Course Schedule & Reading List

**Aug 28: Introduction and Course Overview**

“Towards Sustainable Development” from *Our Common Future* (1987)

Jay, A., D.R. Reidmiller, C.W. Avery, D. Barrie, B.J. DeAngelo, A. Dave, M. Dzaugis, M. Kolian, K.L.M. Lewis, K. Reeves, and D. Winner, 2018: Overview. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA. doi: [10.7930/NCA4.2018.CH1](https://doi.org/10.7930/NCA4.2018.CH1)

**Sept 4: Theories of Resilience**

Masterson, Jaimie et al. 2014. Chapter 2: What Is Resilience? in *Planning for Community Resilience: A Handbook for Reducing Vulnerability to Disaster*, Washington, DC: Island Press. [Ebook](#).

Walker and Salt, “In the Loop: Phases, Cycles, and Scales- Adaptive Cycles and How Systems Change” in *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*, Island Press: 2006.

Wilson, Barbara, “Introduction: Resilience or Resistance?” *Resilience for All: Striving for Equity in Community Driven Design*, Island Press: 2018.

Meadows, Donella, “Places to Intervene in a System,” *Whole Earth Winter, Whole Earth*, 1997.

**Complete the My Ecological Footprint quiz and respond to a prompt on Collab:**  
<http://myfootprint.org/en/>

**Sept 11: The Certification Revolution**

**Sign Up for Groups This Week**

Nicholas Rajkovich, et al. 2013. “LEED, Collaborative Rationality, and Green Building Public Policy,” in *Constructing Green: The Social Structures of Sustainability*, MIT Press. Ebook.

Retzlaff, Rebecca C. 2009. “Green Buildings and Building Assessment Systems: A New Area of Interest for Planners.” *Journal of Planning Literature* 24 (1): 3–21.  
<https://doi.org/10.1177/0885412209349589>.

Ibrahim Hegazy, Wael Seddik, Hossam Ibrahim, “The living building: integrating the built environment with nature evaluating the Bibliotheca of Alexandria according to the challenge imperatives,” *International Journal of Low-Carbon Technologies*, Volume 12, Issue 3, September 2017, Pages 244–255, <https://doi.org/10.1093/ijlct/ctx003>

Living Building Challenge Standard, 3.1: [https://access.living-future.org/sites/default/files/16-0504%20LBC%203\\_1\\_v03-With%20Crop%20Marks.pdf](https://access.living-future.org/sites/default/files/16-0504%20LBC%203_1_v03-With%20Crop%20Marks.pdf)

**Sept 18: Place**

Hirsch, Dennis. "Chapter 15: Ecosystem Services and the Green City," in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, Birch and Wachter, University of Pennsylvania, 2008, [ebook](#).

Alberti, Marina. 2016. Chapter 3: Reframing Urban Ecology, in *Cities that Think Like Planets: Complexity, Resilience, and Innovation in Hybrid Ecosystems*

The High Costs of Free Parking: [https://www.youtube.com/watch?v=Akm7ik-H\\_7U&feature=youtu.be](https://www.youtube.com/watch?v=Akm7ik-H_7U&feature=youtu.be)

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**Sept 25: Water**

Karvonen, Andrew. 2011. Chapter 1 & 2 in *The Politics of Urban Runoff*, MIT Press

"Lessons from Hurricane Harvey: Houston's Struggle Is America's Tale," *New York Times*, November 11, 2017:

<https://www.nytimes.com/interactive/2017/11/11/climate/houston-flooding-climate.html>

Courtney Crosson (2018) Innovating the Urban Water System: Achieving a Net Zero Water Future Beyond Current Regulation, *Technology| Architecture + Design*, 2:1, 68-81, DOI: [10.1080/24751448.2018.1420966](https://doi.org/10.1080/24751448.2018.1420966)

Kate Orff, "Reviving New York's Rivers - With Oysters!" Ted Talk:

[http://www.ted.com/talks/kate\\_orff\\_oysters\\_as\\_architecture?language=en](http://www.ted.com/talks/kate_orff_oysters_as_architecture?language=en)

**Oct 2: Energy: Panel w UVA Operations Leadership**

**Julia Monteith:** Senior Land Use/Community Planner, UVA Office of the Architect

**Cheryl Gomez:** Director of Operations, UVA Facilities Management and Co-Chair of the University Committee on Sustainability

**Jesse Warren:** Sustainable Buildings and Operations Program Manager, UVA Office for Sustainability

"Air Conditioning," The Anthropocene Reviewed Podcast:

<https://www.wnycstudios.org/story/anthropocene-reviewed-air-conditioning-and-net-sycamore-trees>

Di Lucia, Lorenzo, and Karin Ericsson. "Low-Carbon District Heating in Sweden – Examining a Successful Energy Transition." *Energy Research & Social Science* 4 (December 1, 2014): 10–20.

Fortier, et al. "Introduction to evaluating energy justice across the life cycle: A social life cycle assessment approach", *Applied Energy*, V. 236, 15 February 2019, Pp. 211-219

**Oct 9: Health and Happiness**

**State of the Issue Memo (Individual) Due**

Ewing, *Understanding the Relationship Between Health and the Built Environment*: <http://www.usgbc.org/sites/default/files/public-health-built-environment.pdf> skim and then read pp: 115-129

McDonald, Robert. 2015. "Chapter 11: Parks and Mental Health" in *Conservation for Cities*. Washington DC, Island Press.

Haigh, Fiona, Fran Baum, et al. "[The Effectiveness of Health Impact Assessment in Influencing Decision-Making in Australia and New Zealand 2005–2009.](#)" *BMC Public Health* 13, no. 1 (2013): 1188.

Corburn, Jason, Shasa Curl, et al. "[A Health-In-All-Policies Approach Addresses Many of Richmond, California's Place-Based Hazards, Stressors.](#)" *Health Affairs* 33, no. 11 (2014): 1905–13.

**Oct 16: Materials: Guest Lecture Jeana Ripple**

Beatley, Tim. 2000. Chapter 8: Urban EcoCycle Balancing in *Green Urbanism*, Island Press

Jeana Ripple (2016) The Type V City: Encoding Material Inequity, *Journal of Architectural Education*, 70:1, 13-16, DOI: [10.1080/10464883.2016.1122464](https://doi.org/10.1080/10464883.2016.1122464)

Preservation Green Lab, "The Greenest Building: Quantifying the Environmental Value of Building Reuse: Introduction, Life Cycle Analysis, and Conclusions:" <https://forum.savingplaces.org/viewdocument/the-greenest-building-quantifying>

Baxter, G.; Srisaeng, P.; Wild, G. Sustainable Airport Waste Management: The Case of Kansai International Airport. *Recycling* 2018, 3, 6.

**Oct 23: Equity**

Colston et al, "Exploring the entry points for citizen science in urban sustainability initiatives," in *Current Opinion in Environmental Sustainability* (2015) 17:66–71

McLaren, Duncan. 2003. Chapter 1: Environmental Space, Equity, and the Ecological Debt in *Just Sustainabilites: Development in an Unequal World*, MIT Press. [Ebook.](#)

Wickramasinghe, Anoja. 2003. Chapter 11: Women and Environmental Justice in South Asia in *Just Sustainabilites: Development in an Unequal World*, MIT Press. [Ebook.](#)

"Demand for Power," Broken Ground Podcast: <https://brokengroundpodcast.org/>

**Oct 30: Beauty**

**Video Storyboard Due (Group)**

The Fargo Project: Jackie Brookner at TEDxFargo: <http://youtu.be/yplULLsVYzc>

Wilson, Barbara Brown. “The Lower East Side: Tactical Urbanism Holding Space for the People’s Waterfront,” *Resilience for All: Striving for Equity through Community-Engaged Design*, Island Press: 2018, pp. 59-100

Palaces for the People, 99% Invisible Podcast:  
<https://99percentinvisible.org/episode/palaces-for-the-people/>

**Nov 6: Toward Resilient Affordable Housing: Guest Speaker: Sunshine Mathon**  
Brey, Jared. “Climate Change is Already Amplifying the Affordable Housing Crisis” at [https://nextcity.org/daily/entry/climate-change-is-already-amplifying-the-affordable-housing-crisis?mc\\_cid=063416f593&mc\\_eid=9680fc1bdc](https://nextcity.org/daily/entry/climate-change-is-already-amplifying-the-affordable-housing-crisis?mc_cid=063416f593&mc_eid=9680fc1bdc)

Rice, J. L., Cohen, D. A., Long, J., & Jurjevich, J. R. (2019). Contradictions of the Climate-Friendly City: New Perspectives on Eco-Gentrification and Housing Justice. *International Journal of Urban and Regional Research*. <https://doi.org/10.1111/1468-2427.12740>

Feenberg, Andrew “Incommensurable Paradigms: Values and the Environment” in *Pragmatic Sustainability*

**Nov 13: Toward a Resilient Food System: TBA**  
McLaren and Agyeman, Introduction and Section 1: Sharing Consumption, in *Sharing Cities*, pp. 1-69, [ebook](#)

Hess, David, “The Localization of Activism and Innovation,” in *Alternative Pathways in Science and Industry: Activism, Innovation, and the Environment in an Era of Globalization*, MIT Pres, 2007.

Horst, Megan, Nathan McClintock, and Lesli Hoey. “The Intersection of Planning, Urban Agriculture, and Food Justice: A Review of the Literature.” *Journal of the American Planning Association* 83, no. 3 (July 3, 2017): 277–95.

Sullivan, D. M. (2014). From food desert to food mirage: Race, social class, and food shopping in a gentrifying neighborhood. *Advances in Applied Sociology*, 4(01), 30.

**Nov 20: Regenerating Our Carbon Footprint: Guest Lecture w Kevan Klosterwill**  
**Poster Draft Due**  
Readings TBA

**Nov 27: Thanksgiving: No Class**

**Dec 4: Final Presentations**

**FINAL PROJECTS DUE DECEMBER 9<sup>TH</sup> TO COLLAB**