

Sustainable Cities 1: Theories and Concepts

GEOG 1615 (for students at the Johnstown campus); **URBNST 1613** (for students at the Oakland campus)

Study period: May 2019 (including the follow-up course Sustainable Cities 2)

Location: Amsterdam, the Netherlands

Instructor:

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Course Description:

You may think of cities as engines of pollution and where excessive consumption of scarce resources takes place; however, cities may also be part of the solution to our environmental problems. This undergraduate course is designed to familiarize the student with the concept of sustainability and how it applies in the context of cities; specifically cities in Europe and Amsterdam in particular. The idea of sustainable cities provides a framework for interdisciplinary planning of contemporary cities. We will explore sustainability and urban design in both a global and local context by focusing on the processes that shape the form and function of the built environment. Technological, social, and cultural innovations for sustainable cities will be demonstrated during the course. Through lectures and field visits in Amsterdam, we will explore the theory and practice of urban sustainability, including the history and philosophy of sustainability, ecological footprints, green buildings, alternative energy, innovative transportation solutions, and waste/water management. This constitutes an effort to build better places that are more livable, more equitable, more energy efficient and ecologically sound, and more prosperous for all.

Course Format:

This is a 3-credit study abroad course offered by the University of Pittsburgh system. The course is taught in the city of Amsterdam, the Netherlands. The duration of Sustainable Cities 1 and 2 is from **May 4-June 1, 2019**. This compressed study schedule means that most days will be dedicated to intense study. In addition to classroom time, many days will include field trips to various sites in Amsterdam that illustrate the city's effort to be sustainable. The field trips will mainly be arranged by the Council on International Educational Exchange (CIEE), an organization that provides on-the-ground support for us in Amsterdam. See course schedule below for further details. A typical daily schedule includes lectures in the morning, which is followed by field trips to places in the city that exemplify real world

applications of the concepts we have discussed in class. The field sites will be accessed via public transit that takes us directly to the sites.

The course participants may come from many different academic backgrounds. Because of this potential diversity, there is no prerequisite for the course. But due to the relatively specialized course content, the course corresponds to an upper-level undergraduate course. Initial course readings will be selected so everybody is “on the same page.” The goal is that many of the course participants should be able to use this course as an elective in their major, although students whose area of study does not focus on urban/environmental/international/geographical studies are also encouraged to enroll in the course.

Before and after the trip: An initial course meeting will at the University of Pittsburgh in Oakland on **March 21, 2019**. You will be asked to read material and hand in some assignments before the actual trip takes place in May. This is to familiarize yourself with the sustainable city concept, the city of Amsterdam, and some of the research that you will conduct while in Amsterdam. At the time of the initial course meeting, a Courseweb page will be activated online where you can access course information and submit homework assignments.

Textbook and other readings:

Worldwatch Institute. 2016. *Can a City Be Sustainable?* Washington DC: Island Press.

Additional articles will be assigned. See reading list below.

Note: You must purchase the text in advance. It is available via amazon.com or other online booksellers. The good news is that it is inexpensive and not too big to cart around the world.

Additional readings may be assigned and posted on the Courseweb. For example, articles specifically on Amsterdam are likely to be assigned.

Evaluation:

At the end of the course, there will be a final exam. It will cover the material in the readings and the lectures. The exam format will be essay questions.

You will also write “reflection” papers for many of the field visit. Those papers should consist of background material based on theories and concepts that have been discussed in lecture, as well as your impressions from the field visit and how the field experience connects with the class material. Each paper should be approximately 2 pages. We will write most of the reflection papers the morning after a field visit. Bring a laptop!

Your course grade will be determined as follows:

Exam: 50%

Reflection papers 35%
 Pre-departure papers 15%

Note: All course meetings, lectures, field trips, papers, and the exam are *required*. Obviously, there could be legitimate reasons (e.g., illness) why you have to be absent at some point, but any potential absence have to be approved by the instructor.

The course schedule below is tentative, but includes site visits/guest speakers/activities that CIEE currently has scheduled. There will most likely be some modifications later. Daily readings are listed by chapter in *Can a City be Sustainable?* (abbreviated CACBS) or by author (see readings list below). Lectures will be held in a classroom at the University of Amsterdam.

Course schedule:	Lectures/Readings	Field trips/Guest speakers
Pre-departure readings	<u>Sustainability concepts</u> • Meadows, Randers, and Meadows • Brundtland Report • Girardet 1999 • Wackernagel and Rees • Wheeler 2013a	
<u>Arrival weekend</u>		
Saturday		CIEE orientation and guided walking tour of our neighborhood (3.30-5.30) Welcome dinner @ Café AMOI (6-8pm)
Sunday		Optional: Experience <i>Bevrijdingsdag</i> (Liberation Day) activities in Amsterdam
<u>Week 1</u>		
Monday	<u>Intro to Sustainable Cities</u> (9-Noon) • Ch. 3 (The City: A Systems of Systems) in CACBS • Ch. 4 (Toward a Vision of Sustainable Cities) in CACBS	Survival Dutch Lesson (2-3pm) Canal tour of Amsterdam (3.30-4.30pm)

Tuesday	<u>Transportation (9-Noon)</u> <ul style="list-style-type: none"> • Ch. 11 (Supporting Sustainable Transportation) in CACBS • Newman and Kenworthy • Pucher and Buehler 	
Wednesday	<u>Urban design and land use (9-Noon)</u> <ul style="list-style-type: none"> • Frumkin et al. • Owen • Wheeler 2013b 	<p>“Tolerance” walking tour (1.30-3pm)</p> <p>Optional: Ajax viewing party (evening)</p>
Thursday	<u>Urban ecology and water (9-Noon)</u> <ul style="list-style-type: none"> • Ch. 17 (The Vital Role of Biodiversity in Urban Sustainability) in CACBS • Beatley and Newman • Kimmelman • Rijkswaterstaat 	<p>Site visit to Houthavens neighborhood and NDSM port area redevelopment (2-5pm)</p>
Friday	<p>Visit to Department of Physical Planning and Sustainability, City of Amsterdam (9.30 – 11.00am)</p>	<p>Optional: Documentary “Do More With Less” at Pakhuis De Zwijger)</p>
<u>Week 2</u>		
Monday	<u>Waste management</u> <ul style="list-style-type: none"> • Ch. 13 (Source Reduction and Recycling of Waste) in CACBS • Ch. 14 (Solid Waste and Climate Change) in CACBS 	<p>Service learning project at De Ceuvel – a café and redevelopment project focused on cyclical materials flow (1.30-5.30)</p>
Tuesday	<u>Climate change, energy, and cities (9-Noon)</u> <ul style="list-style-type: none"> • Ch. 6 (Cities and Greenhouse Gas Emissions) in CACBS • Ch. 10 (Is 100% Renewable Energy in Cities Possible?) in CACBS 	
Wednesday	<u>Social and economic sustainability</u> <ul style="list-style-type: none"> • Cohen • Pinkster and Boterman • Van der Zee • Wurpel et al. 	<p>Visit to a self-built green residential home in Amsterdam-Noord (2-2.30pm)</p>

Thursday	<p><u>Green housing</u> (9-Noon)</p> <ul style="list-style-type: none"> • Ch. 8 (Reducing the Environmental Footprint of Buildings) in CACBS • Ch. 9 (Energy Efficiency in Buildings) in CACBS 	<p>Guided walking tour with Architecture Tours, including the A'dam Toren observation deck (2.30-4.30pm)</p> <p>Guest speaker on urban and regional planning: Dr. Frederico Savini (3-4.30pm)</p>
Friday	<p>Students will independently write a reflection essay on previous day's field trip. Submit by noon on Courseweb.</p>	
Saturday		<p>Optional: Eurovision viewing event (evening)</p>

Readings:

Beatley, T. and Newman, P. 2013. Biophilic Cities Are Sustainable, Resilient Cities. *Sustainability*, 2013(5): 3328-3345.

Brundtland Report 1987. Towards Sustainable Development (from United Nations' "Our Common Future"). In *The Sustainable Urban Development Reader*. Routledge.

Cohen, S. 2018. Sustainable Urban Living. In *The Sustainable City*. New York: Columbia University Press.

Crouch, D. and Wiltshire, R. 2005. Designs on the Plot: The Future for Allotments in Urban Landscapes. In A. Viljoen, K. Bohn, and J. Howe (eds.). *Continuous Productive Urban Landscapes*. Amsterdam: Elsevier.

Frumkin, H., Frank, L. and Jackson, R. 2004. Physical Activity, Sprawl, and Health. In *The Sustainable Urban Development Reader*. Routledge.

Girardet, H. 1999. The Metabolism of Cities. In *The Sustainable Urban Development Reader*. Routledge.

Girardet, H. 2005. Urban Agriculture and Sustainable Urban Development. In A. Viljoen, K. Bohn, and J. Howe (eds.). *Continuous Productive Urban Landscapes*. Amsterdam: Elsevier.

Kimmelman, M. 2017. The Dutch Have Solutions to Rising Seas. The World is Watching. *The New York Times*, June 15.

Meadows, D., Randers, J. and Meadows, D. 2004. *Limits to Growth: The 30-Year Update* (synopsis). Chelsea Green Publishing.

Newman, P. and Kenworthy, J. 1999. Traffic Calming. In *The Sustainable Urban Development Reader*. Routledge.

Owen, D. More Like Manhattan. In *Green Metropolis*. Riverhead Books.

Pinkster, F. and Boterman, W. 2017. When the Spell is Broken: Gentrification, Urban Tourism and Privileged Discontent in the Amsterdam Canal District. *Cultural Geographies*, 24(3) 457–472.

Pucher, J. and Buehler, R. 2008. Cycling for Everyone: Lessons from Europe. *Transportation Research Record*, 2004(1): 58-65.

Rijkswaterstaat. 2011. *Water Management in the Netherlands*. Ministry of Infrastructure and Environment.

van der Schans, J.V. 2010. Urban Agriculture in the Netherlands. *Urban Agriculture Magazine*, 24 (September), 40-42.

van der Zee, R. 2016. The ‘Airbnb Effect’: Is it Real, and What is it Doing to a City Like Amsterdam? *The Guardian*, 6 Oct 2016.

Viviano, F. 2017. This Tiny Country Feeds The World. *National Geographic*, September 2017.

Wackernagel, M. and Rees, W. 1996. What Is an Ecological Footprint? In *The Sustainable Urban Development Reader*. Routledge.

Wheeler, S. 2013a. Sustainable Development. In *Planning for Sustainability: Creating Livable, Equitable and Ecological Communities*. 2nd Edition. Routledge: New York.

Wheeler, S. 2013b. Landuse and Urban Growth. In *Planning for Sustainability: Creating Livable, Equitable and Ecological Communities*. 2nd Edition. Routledge: New York.

Wurpel, G., Akker van den, M., Betsema, M., Oegema, T. 2013. *Updating the Future: The Next Steps in Becoming the Sustainable Global Port, Using Scenarios from Limits to Growth*. Port of Rotterdam and IMSA Amsterdam.

