



ENV/GSCI/SOC 355 - Towards Green Cities: Local and Global Perspectives

Course Syllabus *Spring 2020*

Instructor: David Grohmann, PhD; Viviana Lorenzo (certified architect)

Credits: 3

Contact Hours: 45

Prerequisites: None

Class Hours: TBA

Office Hours: immediately after class or by appointment

Course Type: Lecture / workshop / field study and practice

Lab Fee: TBA

Course Description

For the first time in history, the majority of the world's people live in cities. These numbers are growing. Cities are major contributors to resource consumption, environmental degradation and climate change. Cities are also centers of technological and socio-cultural innovation. Cities must be at the forefront of actions for sustainable development - working *with* nature, without destroying it.

This class will review concepts of sustainable urbanism and the systems that comprise it: open space, mobility, food and water, energy and waste. Our main focus, which reflects its methodology, is based on two premises: (a) the role and importance of *Place* as an impediment or facilitator of urban sustainability and (b) the fundamental part played by *education and participation* in guaranteeing commitment to sustainable policies and practice. Through these perspectives, students will comprehend the principles informing sustainable urban planning and the sociocultural, economic, and political challenges faced by its promoters. Our approach is both global and local - we use Perugia as our case-context while considering broader issues faced by those who promote and apply sustainability internationally.

We will engage local partners, analyze various case studies and places (some of which have been created with the collaboration of past Umbra Placemaking Course students), and pursue a team project which allows students to apply what they've learned to concrete project(s) for sustainable urban transformation. Students bring their perspectives and expertise to the shared goal of developing small-scale placemaking projects which promote sustainability in Perugia, which can be applied in other international contexts.

The course utilizes workshops, comparative readings, community dialogue, and observation to understand the relationships between people, places, values and actions. Students will document neighborhood spaces-community gardens, meet local activists, participate in community workshops and collaborate with Associations and institutions to learn and practice strategies for transforming

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urban spaces into resilient shared places, while creating more friendly, sustainable, and inclusive communities and cities.

The Orto Sole Urban Garden Project

In this course students will see many aspects of sustainable urban planning, both in Perugia and in other cities. Our main project will be with the urban garden just a few minutes from Perugia's main piazza, [Orto Sole](#) (the "Sun Garden"). This urban garden is one node in a larger network of urban gardens in Perugia, all with many goals above and beyond simply the production of food in an urban context. We'll collaborate with students from the University of Perugia and their professor, Dr. David Grohmann, and the organizers of Orto Sole to build several beds that will host experimental plantings from the University of Perugia's seed bank at the College of Agriculture. In collaboration with Italian students and Umbra Institute students from other classes, we will evaluate the productivity of some very old Umbrian varieties in the face of global climate change, in the hopes of finding varieties more suitable for hotter temperatures and more variable weather. In addition to this work, we will work with the neighborhood to create new social outreach projects for the garden.

Course Learning Outcomes

By the end of the course, students will be able to:

1. *identify* key terms, concepts, and principles related to sustainability in urban environments; as well as specific connections between people, perceptions, activities, identity and cities' open spaces and their systems;
2. *explain* how current debates about urban sustainability are impacted by local, national, and international politics and economies;
3. *compare* urban systems all over the world through the analysis of case studies on both the public and private sectors—including, energy, water and food, waste management, transportation, architecture, and green spaces—for their effectiveness in implementing policies, technologies, and organizational models that support urban sustainability;
4. *appreciate and apply* basic design, construction, and process skills in the creation of small, livable places aimed at enhancing urban sustainability;
5. *integrate* experiential learning activities with classroom knowledge to identify concrete strategies for supporting urban sustainability and communicate them using systematic, public-facing, and ethical scholarship with twenty-first-century research and communication tools.

Course Materials

Readings

The only required book is Steven Cohen's *The Sustainable City*. All other readings are in the course reader.

Other

Students are required to maintain a course journal during the semester.

Assessment

| | |
|---------------------|-----|
| Participation | 30% |
| Course Journal | 30% |
| Final Presentations | 40% |

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Course Requirements

Grades are based on a combination of participation, in-class assessments, service learning, and exams.

Participation (10%)—Class participation grades are based on oral contributions to the collective learning experience of the class. Participation means active engagement in the course: being consistently prepared for class having carefully read the assigned readings, asking questions, responding to questions, listening attentively to others, and offering your own insights and opinions. Some lectures may include pop quizzes.

Course Journal (20%)—The course journal is an integral part of this class. It's a sandbox for your reflections and a place for you to elaborate on what you've learned in class and apply it to both Perugia and your hometown.

Final Presentation (10%)

Attendance Policy

Class attendance and participation in all course activities is mandatory. Because this is a one-credit course with limited class meetings, students are allowed one “free” absence, which do not need to be justified. It is the students' responsibility to save this absence in case of real necessity (sickness or any other unforeseen circumstances that may prevent students from being in class or attending a required activity). Each additional absence, unless for a very serious reason, will lower the students' grade by one grade level (i.e., a final grade of a B+ would be lowered to a B).

If students miss class or a required class activity, they are responsible for obtaining notes from other students and/or for meeting the professor during office hours. It is also the policy of the Institute that any student who has eight or more absences automatically fails the class. Except in the case of medical emergencies, absences are not accepted when tests are scheduled; tests cannot be made up. Furthermore, scheduled times and dates indicated for exams, quizzes, oral presentations, and any other graded assignments cannot be changed for any reason. Even if more sections of the same class are activated, students may only take exams during the scheduled times and dates for the section they are enrolled in. Presence during mandatory course activities is especially important for student performance in class. Missing a required activity, unless for a very serious reason that is communicated to the professor and the Academic Director in a timely manner, will lower students' final grade by one grade level (i.e., a final grade of a B+ would be lowered to a B).

Academic Integrity

All forms of cheating (i.e., copying during exam either from a fellow student or making unauthorized use of notes) and plagiarism (i.e., presenting the ideas or words of another person for academic evaluation without acknowledging the source) will be handled according to the Institute Academic Policy, which can be found in the Umbra Institute Academic Policies and Conduct Guidelines.

Classroom Policy

Please refrain from computers, cell phones, and other electronic devices during class time or during course activities. Active class participation is part of students' final grades. Students are expected to follow the policy of the Institute and demonstrate the appropriate respect for the historical premises that the school occupies.

Schedule of Topics, Readings, and Assignments

Week 1—Introduction & Definitions

Tuesday class: Introduction to the class. Why cities? What is urban sustainability? Some numbers on (non)sustainable urbanization

Thursday lab: An urban “snoop about” in Perugia’s ancient center. Café Conversation: Is this Place sustainable?

Readings

Cohen, Steven. *The Sustainable City*. New York: Columbia University Press, 2017. Read “Defining the Sustainable City,” pages 3-15.

McPhearson, T. et al. “Advancing Urban Ecology toward a Science of Cities” in *BioScience* 66 (3), March 2016, pages 198-212

Lorenzo, R. “The numbers of (non)sustainable urbanization” from *The Sustainable City: Participation, Community and Place*. Milan: Eleuthera, 1998, pages 17-22.

Week 2— Roots of the “problem”: A closer look at the evolution of an Italian city.

Tuesday class: Italy and Perugia, an overview of its Urban History and Modern Evolution. The “sustainability” (or not) of its form and functions.

Thursday lab: Visit to Perugia’s “Highline” (explorations along a medieval aqueduct converted to an elevated walkway – a walk out of the city into “the country”)

Readings

Zappelli, M. R. *Home Street Home: Perugia’s History Told Through Its Streets*. Edited by Zachary Nowak. Translated by Deborah Rim Moiso and Alan Whykes. Perugia, Italy: Morlacchi Editore, 2013.

Read “Brief History of the City’s Development” and “Via delle Prome,” pages 14-21 and 122-123.

Lorenzo, R. “The Modern Italian City” in *The Sustainable City*, pages 28–31.

Week 3—Sustainability in the Urban Environment: Systematic Components

Tuesday class: Overview and discussion of sustainable urban systems: Energy, Waste, Water, Food, Open Space and Green Infrastructures. Contextualization Italy _ Perugia.

Thursday lab: Interactive exercise in classroom. The systems which make up a “living place” and a “city” (“Our Island” exercise).

Readings

Cohen, *The Sustainable City*, “Sustainable Urban Systems: Defined and Explained,” 15-38.

European Council of Town Planners, *Checklist for Sustainable Development at the Local Level*. Bolzano, 2002

Week 4— Public Policy for Sustainability and Citizen Participation.

Tuesday class: an overview of the evolution of public policy in favor of Urban Sustainability. The importance of local authorities and community action (viz., Europe). From Rio Declaration to Today.

Thursday lab: interactive in-class reflections/exercises on European Policy approaches vs USA.

Readings

Cohen, *The Sustainable City*, “The Role of Politics and Public Policy in Building Sustainable Cities,” 89-111.

Sancassiani, Walter. “Local Agenda 21 in Italy: An Effective Governance Tool for Facilitating Local Communities’ Participation and Promoting Capacity Building for Sustainability.” *Local Environment* 10, no. 2 (April 1, 2005): 189–200.

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Lorenzo, R. and Vannucci, S. "Getting oriented for the future: documents, agreements, tools and resources from a global to local level". In *Agenda 21 Locale*. Italian National Agency for the Environment, Rome. 31/2004. Pages 103 -119.

Week 5— The need for a critical view and prospectus. How we got here and the “way out”?

Tuesday class: The two *focal points* of the course methodology are introduced: the role of Place knowledge and Placemaking and the importance of direct community Participation for sustainability.

Thursday lab: visit to Orto Sole Community Garden

Readings

Hester, R. (2007). *Community Design by Intricate Oppositions*. Proceedings of the 6th Conference of the Pacific Rim Community Design Network, Quanzhou, Fujian, China, June 18-21. Online.

Anirban Adhya, "Jane Jacobs and the Theory of Placemaking in Debates of Sustainable Urbanism", in *The Urban Wisdom of Jane Jacobs*, edited by Sonia Hirt. London: Routledge, 2012. Pages 215-228

Week 6—A closer look: Place experience and transformation as related to Urban Sustainability

Tuesday class: Discussion about urban gardens.

Thursday lab: visit to San Pietro Community Garden of the Department of Environmental, Agricultural and Nutritional Sciences (UPG) and Umbra Placemaking efforts. (with Prof. David Grohmann, University of Perugia).

Readings

Lorenzo, "Place or non-Place" and "Towards a Method" in *The Sustainable City*, pages 56-64.

Project for Public Spaces, "Placemaking: what if we built our cities around places?" Manual. New York: P.P.S., 2016.

Week 7—Transport & Mobility

Tuesday class: The ways people move around in, and to/from, cities have differing impacts on environmental sustainability, social relations and health. We will start from *close up* - in the street.

Thursday lab: visit to "Alternative Mobility Perugia" (Rocca Paolina Public Escalator and Mini-metro) "People watching exercises".

Readings

Cohen, *The Sustainable City*, "Mass and Personal Transit," 131-152.

Travisi, Chiara M., Roberto Camagni, and Peter Nijkamp. "Impacts of Urban Sprawl and Commuting: A Modelling Study for Italy." *Journal of Transport Geography* 18, no. 3 (May 2010): 382–92.

Jane Jacobs, *Life and Death of Great American Cities*. New York: Vintage Books, 1961. Read Chapter 2 "The uses of Sidewalks: safety", pages 29 - 54.

Week 8—Green Spaces and Infrastructures.

Tuesday class: The importance of (designed) natural systems in urban settings. Nature Based solutions and Blue-Green Infrastructure concepts.

Thursday lab: visit to the Tiber River Linear Park

Readings

Zahra Ghofrani, Victor Sposito, and Robert Faggiani "A Comprehensive Review of Blue-Green Infrastructure Concepts" in *International Journal of Environment and Sustainability* Vol. 6 No. 1, pp. 15-36 (2017)

Irvine, Katherine N., Patrick Devine-Wright, Sarah R. Payne, Richard A. Fuller, Birgit Painter, and Kevin J. Gaston. "Green Space, Soundscape and Urban Sustainability: An Interdisciplinary, Empirical Study." *Local Environment* 14, no. 2 (February 2009): 155–72.

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Week 9—Climate Change’s Impact on Urban Sustainability

Tuesday class: Building local resilience through communication, participation and placemaking.

Thursday lab: discussion with activists from Orto Sole and T-Urb-Azione Project (Sant’Angelo Park)

Readings

Akbari, Hashem, Constantinos Cartalis, Denia Kolokotsa, Alberto Muscio, Anna Laura Pisello, Federico Rossi, Matheos Santamouris, Afroditi Synnefa, Nyuk Hien Wong, and Michele Zinzi.

“Local Climate Change and Urban Heat Island Mitigation Techniques – the State of the Art.”

Journal of Civil Engineering and Management 22, no. 1 (January 2, 2016): 1–16.

“Applying Resilience Thinking: Applying Seven Principles for Building Resilience in Social-Ecological Systems” SRC, Stockholm University, 2017

WEEKEND TRIP TO FERRARA AND BOLOGNA.

**Urban Center and model projects on green infrastructures and water management
for the sustainable common good**

Week 10—Food Systems for Urban Sustainability.

Tuesday class: Urban agriculture, community gardens and the Continuous Productive Urban Landscape.

Thursday lab: visit to San Pietro Community Garden / presentation of Todmorton, UK, “Edible Cityscape” by Prof. David Grohmann.

Readings

Cohen, Nevin, and Kristin Reynolds. “Resource Needs for a Socially Just and Sustainable Urban Agriculture System: Lessons from New York City.” *Renewable Agriculture and Food Systems* 30, no. 1 (February 2015): 103–14.

McClintock, Nathan. “Radical, Reformist, and Garden-Variety Neoliberal: Coming to Terms with Urban Agriculture’s Contradictions.” *Local Environment* 19, no. 2 (February 7, 2014): 147–160

Week 11—A closer look towards action: Placemaking for good/food.

Tuesday class: Community gardens are sustainable and just places, made by, and cared for people.

Thursday lab: Visit to Orto Sole—Community Workshop with activists and residents.

Readings

Grohmann, D. and D. Meniconi. “The Vegetable Gardens of St. Peter (Perugia-Italy): The Rebirth of a Forgotten Place”. IFLA World Congress International Federation of Landscape Architects, Turin 2016 (on line)

Nar, Komisar and K. Gorgolewski. “Urban Agriculture as ordinary urban practice.” In *Second Nature Urban Agriculture*. Routledge: London, 2014, pages 24-31.

Week 12— Let’s DO something!

Tuesday class: Development of project ideas selected at workshop: building/planting intervention

Thursday lab: Building / planting / promoting activities

Week 13— We DID it!

Tuesday class: continued Building / planting / promoting activities

Thursday lab: conclusion Building / planting / promoting activities

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Week 14—Presentations

A Celebratory Event at Orto Sole – presentation of class placemaking efforts.

The Final Exam and Special Academic Events Calendar will be provided later in the semester.