



AAF1216 ALTRE - VIAGGI DI ISTRUZIONE, CONVEGNI, SEMINARI

29904-INGEGNERIA PER L'AMBIENTE E IL TERRITORIO [L-270 - ORDIN. 2019] - L-7
AA 2020-2021

aka

“ECOLOGICAL URBANISM”

This course, conducted entirely in English by Architect Tom Rankin (BA, Princeton, MArch Harvard), introduces students to the problems of sustainable urban design and some of the innovative (and traditional) opportunities and techniques to reduce the environmental impact caused by urban development.

Schedule

Synchronous Meetings: Wednesdays 16:00

Asynchronous Lectures available from Mondays

Via Eudossiana, 18 Roma Google Classroom: Class code **76nfstr**

First meeting: Wed 24 Feb 2021

Register online before first meeting on [Google Classroom](#)

<https://classroom.google.com/c/MjJwNDQ2NTI4MDE5?cjc=76nfstr>

Course Programme

The course is structured thematically in three phases.

1. The **first phase** will consist of weekly slide lectures followed by occasional seminar discussions based on readings and viewings of related video presentations. Students will begin to research and prepare material for thematic presentations introduced below.
2. Thematic presentations will be **presented orally with slides during the second phase**, with the results also being compiled into a **written report**.
3. During the **final phase** there will be an optional **short oral exam** to evaluate students' comprehension of the lectures and readings. Students may pass the course but not receive excellence points without doing the oral exam.

GRADING

The final evaluation will be based on the student's performance on the presentation (50%), written paper (40%), and oral exam (10%).

Excellence points will be granted to those students performing outstandingly in the course in all three phases above, based on a. research

Learning Objectives

- Gain theoretical and practical experience around issues of sustainability and urban design.
- Learn about cities around the world and their specific approaches to ecology.
- Apply English-language verbal, written, interpersonal and cross-cultural communication skills in a variety of professional and/or cultural contexts, including the online context.
- Learn to engage with simple project management and communications applications to foster critical understanding of project-based communication.
- Develop a greater appreciation of career opportunities while more clearly defining personal goals.
- Develop and improve time, stress management, and problem-solving skills.
- Observe, analyze, and apply professional behaviors in businesses and organizations.
- Demonstrate creativity, initiative, and responsibility.
- Learn how to create and track learning outcomes
- Document knowledge and skills learned during the internship.
- Learn how to work collaboratively as part of a team with specific goals.

THEMES

1. **Water.** Where does it come from, where does it go, how is it managed? What effect does the recognition of the limits of clean water have on urban development?
2. **Green Space.** What is the role of green space in the city? How can it be defended and improved?
3. **Urban Fabric.** How does the choice of where to site buildings, how to plan and regulate development, impact the city's performance?
4. **Energy.** Where does it come from and how is it managed? What are the true costs vs. the economic costs? What strategies exist to reduce the energy consumption (and subsequent emissions) related to urban development?
5. **Waste.** What happens to the solid and liquid waste produced by human inhabitation? Where does it go, how is it managed, and how can it be reduced or eliminated, or at least turned into a resource?
6. **Transportation.** How do people move around the city and between cities and what are the environmental and personal costs?
7. **Community.** What role do stakeholders play in the development of more environmentally sustainable cities? How is participation essential to ecological urbanism?

Assignment:

This year the research workshops will involve a comparison of Rome with another global city. The chosen city will be analyzed using one or more of the course themes listed above and then the same analysis will be applied to Roma Capitale. In particular we will be addressing the notion of Smart City and suggesting ways in which technology can facilitate sustainable urban living.

You should work in groups of 3-4 although you may also request to do the work individually if special situations warrant it. A list of cities to choose from and a form to sign up will be posted during the first lessons.

Look for examples of successful urban revitalization projects, best practices, creative solutions to ecological challenges such as flooding or pollution. How will the needs of disease containment impact efforts to lower the environmental impact of city policies and practices?

Each student in the group will address a discrete phenomenon to research and present, but these components must be coordinated by the group to comprise a unified presentation.

Presentations will be given orally in the classroom, in English, with the support of digital slides (power point, etc.). Each student should speak for between 3 and 5 minutes.

Written reports must be between 1000-1500 words per student, clearly indicating the author of each section. Illustrations and graphics should be clearly labeled and all quotations must be credited to their source. Reports should be formatted A4 and submitted digitally in pdf format at the time of the presentation.

Calendar

WK 0 Wed 24 Feb 2021

FIRST MEETING to decide course methodology in light of pandemic.

3 March no meeting,

WK 1 8-10 March 2021

LECTURE: INTRODUCTION: Ecological, Sustainable, Resilient and Smart

READ: Rifkin Intro Assign this with video of Rifkin

WATCH: tba

SEMINAR/ WORKSHOP:

Discuss Concepts of Ecological Urbanism, Rifkin's plan

WK 2 15-17 March 2021

LECTURE: Water

READ: tba

WATCH: Balsher Singh Sidhu, TED x Are We Running Out of Clean Water? , PBS

Newshour on Rome's water crisis

SEMINAR/ WORKSHOP:

Discuss Water issues, Tiber River

WK 3 22-24 March 2021

LECTURE: Green

READ: Excerpt from Steel, C. Hungry City

WATCH: Carolyn Steel How Food Shapes our Cities

SEMINAR/ WORKSHOP:

Discuss Urban Agriculture

WK 4 29-31 March 2021

LECTURE: Urban Fabric

READ: tba

WATCH: Stewart Brand, What Squatters Can Teach Us

SEMINAR/ WORKSHOP:

Discuss Formal and informal settlements

WK 5 5-7 April 2021 NO LESSONS

WK 6 12-14 April 2021

LECTURE: Energy

READ: Jeremy Rifkin, The Third Industrial Revolution (pdf)

WATCH: Edward Mazria Architecture 2030

SEMINAR/ WORKSHOP:

Discuss alternative energy sources and storage methods and their effect on cities

WK 7 19-21 April 2021

LECTURE: Waste

READ: Kevin Lynch, The Waste of Place

WATCH: William McDonough, Resource Abundance by Design

SEMINAR/ WORKSHOP:

Discuss Cradle to Cradle concept

WK 8 26-28 April 2021

LECTURE: Mobility

READ: Safdie, The Ailing City

WATCH: Oslo on its Way to Becoming a Car-Free City

SEMINAR/ WORKSHOP:

Discuss Rome PUMS and Mobility 3.0

WK 9 3-5 May 2021

LECTURE: Community

READ: Smart Cities Are Built By Smart People, Not Smart Things

WATCH: Carlo Ratti: Ten Urban Innovations.

SEMINAR/ WORKSHOP:

Meet in city teams to review progress

WK 10 10-12 May 2021

WORKSHOP:

Meet in city teams to review progress

WK 11 19 May 2021

WORKSHOP:

Meet in city teams to review progress

WK 12 WED 26 May 2021

Student Presentations

WED 9 JUNE 2021

Student Presentations (verbalization)

Wed 7 July 2021

Oral Exam (verbalization)

Bibliography

The principal articles read in the course are listed in the program and will be provided digitally in Classroom

Below are additional suggested readings for students who want to learn more:

Mohsen Mostafavi, (Editor), *Ecological Urbanism*, Lars Müller Publishers; 1 edition, 2010

Rifkin, Jeremy. *The Third Industrial Revolution*. 2010. *Available on-line

William McDonough and Michael Braungart, *Cradle to Cradle*. New York, NY: Northpoint Press, 2002.

Mitchell, William J. *Me++ The Cyborg Self and the Networked City*. MIT Press, 2004.

Brown, Lester. *Plan B 3.0: Mobilizing to Save Civilization*. W.W. Norton & Co. 2008.

Sassen, Saskia. "Seeing Like a City" in Burdett, Ricky, ed. *The Endless City*. Phaidon. 2007

Ratti, Carlo, *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life*, Yale University Press, 2016

Rankin, Thomas Greene. *Rome Works: An Architect Explores the World's Most Resilient City* Peruzzi Press, 2015.