

SEMINARIO TEMATICO

DESIGN IN THE ANTHROPOCENE

Sun, water and soil

2023, October 27th / November 3rd

Santa Teresa, Dipartimento di Architettura DIDA

Via della Mattonaia 8, Firenze

TEACHERS

/ DIDA

Prof. Francesco Alberti
Scientific coordinator

Prof. Giulio Giovannoni
Prof. Giuseppe Ridolfi
Dott. Giulio Hasanaj

/ PUCE

Michael Davis
Lizeth Lozano
Adriana Mejia
Jaire Cagigal

THEME

Theme of the seminar is the need for a change of approach in architectural and urban design to meet the challenges of the ecological transition.

The seminar provides students with the opportunity of:

- deepening the ability to analyze, understand and identify design solutions on design in the age of the Anthropocene;
- developing interdisciplinary and group work skills;
- working out design proposals in a limited time-frame, marked by a contextual/site-specific approach.

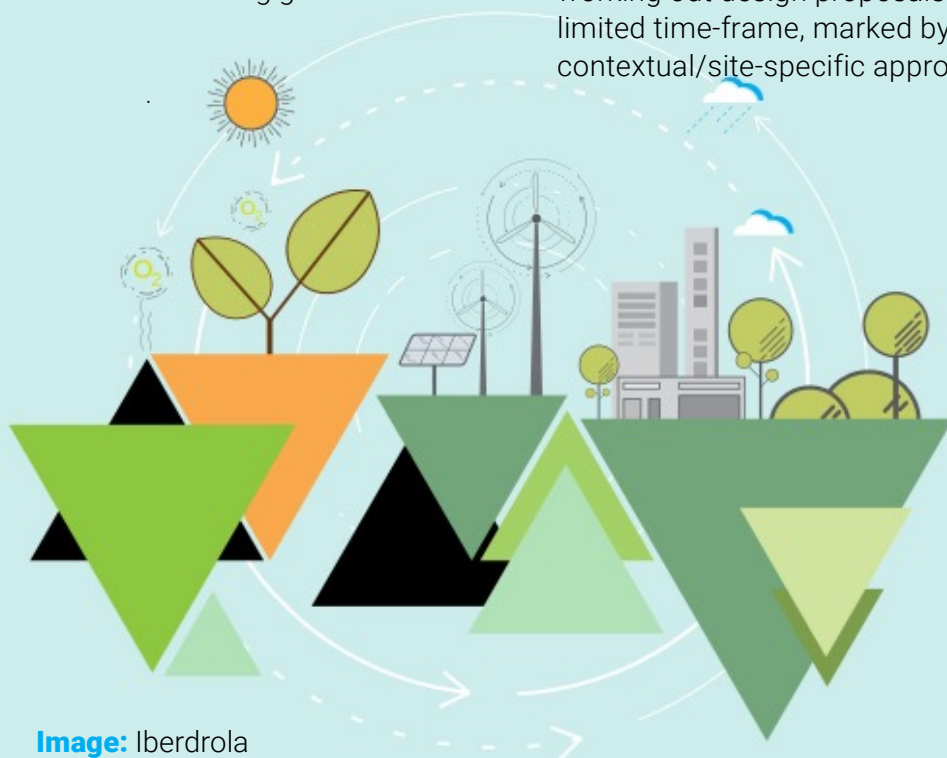
REQUIREMENTS

Students in the master's programs of the School of Architecture (including students in the fourth or fifth year of the five-year degree program in Architecture).

English Language

2 CFU

Cod. B021651 or
B033136



REGISTRATION

max 30 students

Online enrollment sending an email to francesco.alberti@unifi.it and to giulio.giovannoni@unifi.it by October 22.

THEMATIC SEMINAR

DESIGN IN THE ANTHROPOCENE:

SUN, WATER AND SOIL

A.Y. 2023/2024 first semester

Course codes: **B021651 (or B033136)**

Dida Instructors: Francesco Alberti, Giulio Giovannoni, Giuseppe Ridolfi

Pontificia Universidad Catolica de Ecuador instructors: Michael Davis, Lizeth Lozano, Adriana Mejia, Jaire Cagigal

Theoretical framework and seminar topic

Many terminologies exist nowadays for design that works hand in hand with mother nature: sustainable, cradle to cradle, circular, biomimetic.....to name but a few. To make matters worse, for the workshop and our book, we'll be adding another one: Design in the Anthropocene, or Anthropocene Design.

The workshop begins with theory and ends in practice. The morning is spent learning useful tools and tricks of the sustainable design trade, and the afternoon will be putting it all into practice under the tutorship of experts in the field. After a brief introduction to the background and terminologies of the book, we will begin with the Sun. Everything we know that has come into physical existence on Planet Earth began (and will most likely end) with the Sun. It rises, falls and gives us in one manner or another wind, rain and heat. In the workshop this will be discussed in terms of the renewable energies of solar pv, wind power and biomass. Following this water is discussed. Traditionally, the built environment tends to harness clean water, pollute it and discharge it back into the environment. But there are more intelligent ways of managing this. The workshop will discuss the practicalities of rainwater harvesting, water recycling and onsite treatment. Finally, the morning will end in soil. Some of the theory behind cradle to cradle and circular economy approaches will be addressed. Following this, onsite composting of organic waste will be explored, covering how it is done, plus the space required.

The presentations on theory will be interactive, will regular, short exercises for the students regarding a simple, family house. With these techniques to hand, the students will be equipped to take on a more complex, high rise building for the second half of the workshop, where they put the theory into practice under the guidance of expert tutors who will be rotating amongst the groups.

Seminar organization

The thematic workshop will include an intensive project workshop to be held in two distinct days: October 26 and November 3, 2023, and two subsequent times in November devoted to the reworking and presentation of results. The work will be organized in groups of 2/3 students.

Educational goals

The seminar provides students with the opportunity of:

- deepening the ability to analyze, understand and identify design solutions on design in the age of the Anthropocene;
- developing interdisciplinary and group work skills;
- working out design proposals in a limited time-frame, marked by a contextual/site-specific approach.

Seminar timetable

The thematic seminar will have the following schedule for a total of 48 hours of face-to-face teaching and workshops. The schedule can be subject of minor variations:

Friday October 27 (1 cfu)

0900 – 0930: Welcome and Introduction

- The team from Pontificia Universidad Catlica del Ecuador introduces themselves.
- The format of the workshop and areas to be covered are explained.

0930 – 1030: Sun

- This session will cover the theory and rules of thumb for solar pv, wind and biomass energy.
- The students will have a brief, interactive exercise for the single family, detached home, exploring the impact of having an electric car.

1030 – 1045: Break

1045 – 1145: Water

- The focus of the session will be on rainwater harvesting, with a brief exercise to show how to have all year-round water for the irrigation of on-site greenery.
- Grey water recycling is briefly considered, rounding off with the infrastructure needed for on-site black water treatment.

1145 – 1200: Break

1200 – 1300: Soil

- The morning rounds off with cradle to cradle and circular economy theory.
- A brief exercise is carried out to quantify the amount of space needed to carry out on-site composting for the detached family home.

1300 – 1330: Lunch

1330 – 1400: Presentation of Case Study

- The case study is presented: a high rise, mixed use building typical of compact cities.
- A volumetric model is given in Google Sketchup for the students to use.
- An explanation is given of the format of the practical work: tutors will be floating to answer any questions or doubts that arise, and breaks will be taken by each group as and when needed.

1400 – 1500: Design Activity 1 = Focus on Sun

- Each group is asked to quantify the space needed for solar pv, wind power and/or biomass in order to satisfy the energy demands of the case study.
- Each group is required to propose how the space required will be designed into the project.

1500 – 1600: Design Activity 2 = Focus on Water

- Pluviometric data is provided for the case study, typical for temperate climates. Each group must determine the amount of greenspace required.
- The greenspace is incorporated into the design.

1600 – 1700: Design Activity 3 = Focus on Soil

- The groups determine the organic waste produced by the case study.
- The space required for compost is determined and incorporated into the design.
- Each group estimates how much green space can be sustained from the organic mulch produced from the composting process.

1700 – 1830: Team presentations and FB

- Each team gives a flash, 5 min presentation of their work, and receives one piece of feedback from their colleagues, and another from the expert tutors.

1830 – 1900: Closing and thanks

Friday November 3 (1 cfu)

Intensive design workshop: students will develop and deliver the final workshop project followed by their instructors.

University Credits

The thematic seminar recognizes 2 CFUs, corresponding to 16 teaching hours.

Practical information

The seminar is open to students in the following Master's degree programs: Architettura (LM-4 c.u..) Architettura (LM-4); Architettura del paesaggio (LM-3/LM-69); Design (LM-12); Pianificazione e Progettazione della Città e del Territorio (LM-48).

Enrollment mode

Online enrollment sending an email to francesco.alberti@unifi.it and to giulio.giovannoni@unifi.it by October 22.