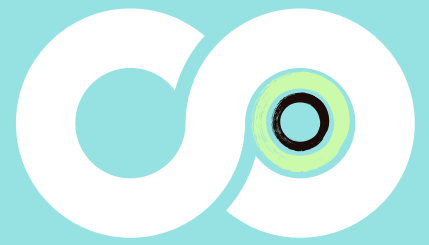


BUILDABLE & SUSTAINABLE

TERRITORY - COMMUNITY - CITY - BUILDINGS



ONLINE 2021
60HS

ARCHITECTURE
FACULTY
URUGUAY

NINTH YEAR EDITION

APRIL TO JUNE

TEACHER

ARCH. CECILIA

HRDLICKA

M O D U L E 1

1 BASICS CONCEPTS:

Sustainability, what does it mean?

Climate change. Environmental impact. Ecological footprint.
The Sustainable Development Goals (SDG).

Life Cycle as a project tool.

Product and building certifications.

Circular economy: fundamentals and objectives

2 SUSTAINABLE URBANISM

The challenge of the 21st century: the cities

Bioclimatic urbanism

From the historic city to the eco-city.

New approaches

Ecology and urban metabolism.

Emerging, smart, resilient cities.

Sustainable communities.

Participatory design and management processes.

Movement "Cities in Transition".

Permaculture and Eco-villages.



3 URBAN ACUPUNCTURE

Strategic areas of intervention:

- Bedroom.
- Mobility and transportation.
- Public space
- TICS in the city.
- Waste.
- Urban agriculture
- Heritage

Cooperative Movements in the city: Eco-neighborhoods and Co-housing.



4 SUSTAINABLE BUILDING DESIGN

Location, climate and comfort

The bioclimatic design.

Bioclimatic strategies / Constructive strategies

The referents: Vernacular architectures.



M O D U L E 2

5 MATERIALS AND LOW IMPACT CONSTRUCTION SYSTEMS

Construction with natural materials: stone, earth, wood, vegetable fibers.

Industrialized architecture: modulation and prefabrication.

Construction with recycled materials: waste, containers.

New Materials.

Healthy buildings:

Biohabitability, dowsing; organic design, biomimicry.



6 RENEWABLE ENERGIES IN BUILDINGS

Introduction. Energy efficiency and certifications.

Zero energy buildings.

Thermal energies: solar thermal, geothermal, biomass.

Electric energies: photovoltaic solar; wind.



7 ECOTECHNIES

Water management

- Purification-treatments, storage and reuse.

The use of vegetation

- Landscaped roofs and walls. Benefits, design and features.

Home automation

- Control and regulation of building systems. Automation and energy saving.



8 COOPERATION

International cooperation. Logic frame

Technology transfer and appropriate technologies.

Social, emergency, cooperative architecture.

COUNTRY EXPERIENCE

The final work will compile local sustainable construction initiatives,

following the course syllabus, in a report "Sustainable Buildable Country".



BUILDABLE SUSTAINABLE IS A COMPREHENSIVE TRAINING PROJECT AND AID FOR DEVELOPMENT IN THREE STAGES: COURSE IN SUSTAINABLE DESIGN AND CONSTRUCTION (territory, city-community and building); DIGITAL PLATFORM OF SUSTAINABLE PROJECTS OF SOCIAL ARCHITECTURE AND COOPERATION TO THE DEVELOPMENT AND CONSTRUCTION OF AN EQUIPMENT IN A RURAL COMMUNITY.