UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Managing Impact of Production On The Environment

2526-1-F7603Q005-F7603Q00502

Aims

The module ‘Managing impact of production on the environment' aims at providing knowledge and skills regarding the concept of planetary boundaries and of the Anthropocene.
Classes will discuss ecology as tool for understand the system Earth and the interconnections among different subsystems (Lithosphere, Atmosphere, Biosphere, Hydrosphere and Anthroposphere).
Case studies will be analysed and discussed during sessions common to the other two modules to provide the necessary interdisciplinary understanding of the topics covered in the course.

Students are invited to consult the syllabus of the entire course for details regarding learning- and skill-related objectives.

Contents

• Basics of Ecology.
• Geological time and the Anthropocene.
• Nine environmental boundaries.
• Ecosystem services, Ecological footprint and LCA.

Detailed program

• Elements of ecology.
• Geological time.
• The Anthropocene debates.
• Concept of systems and complexity of ecological systems.

• Limits and tipping point.
• Environmental surprises.
• Planetary boundaries and doughnuts economy.
• Ecosystem services, ecological footprint and Life Cycle Assessment.

Prerequisites

Basic notions of environmental sustainability.

Teaching form

4 CFUs of mixed theoretical and interactive lessons (32 hours)
• 8 two-hour lectures, in person, mostly frontal teaching and discussion in class, Delivered Didactics.
• 4 two-hour lectures, online, mostly frontal teaching and discussions, Delivered Didactics.

1 CFU, of mixed didactics in the classroom (16 hours).
• 4 two-hour lectures, in person, including group presentations, group debates, discussion of relevant case studies and reading of relevant material in class, Interactive Teaching.

Attendance to lectures and interactive exercises is highly recommended.

Textbook and teaching resource

• Slides
• Notes shown during lectures and additional material on selected topics, *i.e.*, scientific articles, made available on the e-learning website of the course.

Semester

I semester (October - January)

Assessment method

The final exam consists of a single written exam at the end of the course, which comprises the discussion of various topics covered in the course within the three modules, with an emphasis also on the connections between concepts and processes, such as to arrive at a critical evaluation of work from the point of view of planetary boundaries and responsible use of renewable and non–renewable resources.

The final score will be between 18/30 and 30/30 *cum laude*, based on the overall assessment considering the following criteria:

(1) knowledge and understanding;
(2) ability to connect different concepts;
(3) autonomy of analysis and judgment;
(4) ability to correctly use scientific language.

Office hours

Monday, 16:30-18:00, after scheduling an appointment *via* phone or e-mail.

Sustainable Development Goals

QUALITY EDUCATION | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION