



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Ecologia Applicata

2223-3-E1301Q059

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#### Aims

The overall aim of the course is to provide in depth knowledge about ecology and the human impact on ecosystems. The course includes some practical examples to show how applied ecology can be used to face and solve current environmental problems.

After the course the student should be able to:

- Use ecological knowledge in order to understand the distribution of individuals, populations and different distribution of species in ecosystems
- Understand the ecological background to the most important environmental problems
- Apply some common methods for ecological survey

#### Contents

- Definition of pollution
- Description of the main phenomena of air and water pollution
- Ecological flow
- Solid wastes
- Management and treatment of urban wastewaters
- Environmental Impact Assessment

· LCA

## **Detailed program**

The first part of the course will provide the fundamental elements of applied ecology: the definition of pollution will allow to face and understand the different environmental problems and to explain phenomena by adequate metrics and parameters (biological and non biological indicators, quality indices). Case studies will be presented as the basis to analyze phenomena and processes, to quantify their importance and to evaluate possible solutions.

Specific environmental topics will be then presented, as eutrophication, ecological flow, management of solid wastes and wastewaters.

The last part of the course will concern some methodologies to evaluate the anthropic impact as Environmental Impact Assessment, Strategic Environmental Assessment, Life Cycle Assessment, in the frame of environmental sustainability.

## **Prerequisites**

Having passed the exam of Ecology

## **Teaching form**

lectures in presence and in streaming, registered and supported by slides which will be uploaded on e-learning platform within each Monday. Meet platform will be used for lectures and the link will be uploaded on the e-learning before the course starts

## **Textbook and teaching resource**

Teaching material consists of:

· slides available from the e-learning platform

· textbooks: Introduzione all'ecologia applicata. Dalla teoria alla pratica della sostenibilità, Silvana Galassi, Ireneo Ferrari, Pierluigi Viaroli. Edizioni Città Studi; Ecologia applicata. Per un uso consapevole dell'aria, dell'acqua e del suolo, di Roberto Bargagli, Edizioni AMON

## **Semester**

Second semester

## **Assessment method**

Oral exam on the topics of the course

## **Office hours**

Email to [valeria.mezzanotte@unimib.it](mailto:valeria.mezzanotte@unimib.it) to schedule a meeting

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | CLEAN WATER AND SANITATION | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION | LIFE ON LAND

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