UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

# Environmental Economics

**2526-1-F7602M005-F7602M005-2**

## Learning objectives

The course provides a basic knowledge of the language and analytical tools of economics as applied to the environment, while also paying attention to the environment in relation to the tourism industry. By the end of the course students will understand:

- the origins of environmental economics in the history of economic thought;
- the concept of environmental externality;
- the various economic tools used to safeguard the environment and their advantages and disadvantage;
- the various economic theories concerning the problem of the scarcity of natural resources;
- the various economic theories concerning the the relationship between population and the environment;
- the problem of environmental sustainability in politico-economic context;
- the basic differences between environmental and ecological economics and the topics pertinent to each field;
- the impact of the tourism industry on the environment.

## Contents

The course explores the relationship between economics and the environment, focusing on three main issues: externalities, natural resources and population.

The course is divided into four parts. The first part offers a historical overview of how the environment and natural resources have been perceived in various schools of economic thought, up to the development of the concept of externality by A.C. Pigou in 1920.

The second, analytic, part critically examines the economic efficiency, and political feasibility, of the main tools available for regulating environmental externalities. Space will be made for critical reflections on the impact of the tourism industry on the environment.

The third part of the course analyses the problem of the scarcity of the natural resources. We will discuss topics such as, “the tragedy of the commons” and the differences between growth and development. We will conclude by comparing the standard approach (e.g. the environmental Kuznets curve) with the criticisms of ecological economists (e.g. K. Boulding; N. Georgescu-Roegen; E.F. Schumacher; S. Latouche).

The fourth part addresses the issue of population. Standard demographic policies (e.g. the macroeconomics of fertility) will be outlined and compared with neo-Malthusian perspectives (P. Ehrlich; H. Daly).

## Detailed program

Part 1. The historical roots of environmental economics

- T. Malthus: the theory of population growth
- J.S. Mill: the steady state principle
- W.S. Jevons: the scarcity of natural resources
- A. Marshall: external economies and diseconomies
- A.C. Pigou: environmental externality

Part 2. Externalities

- Pollution control policies: market and non-market incentives
- The Pigouvian tax
- The Coase theorem and tools of Coasian inspiration (negotiable permits). Aside on the Kyoto Protocol
- "Command and Control"
- Green nudges
- Methods for determining damages to the environment (cost-benefit analysis; the contingent evaluation method; the hedonic price method)

Part 3. Natural resource scarcity

- Private goods, public goods, the commons and their characteristics:
- "The tragedy of the commons": Garrett Hardin and Elinor Ostrom
- Economic growth and development: a comparison between environmental and ecological economics (the environmental Kuznets curve; the *Limits to Growth* report; Georgescu-Roegen and the laws of thermodynamics)
- The rise and the fall of GDP as macroeconomic index and the new indexes of well-being

Part 4. Population

- Population and the environment: the microeconomics of fertility
- Neo-Malthusian theories: Ehrlich equation
- H. Daly *vs* N. Georgescu-Roegen

## Prerequisites

Students should have a basic knowledge of the principles of micro- and macro-economics.

## Teaching methods

Traditional and interactive lessons.

## Assessment methods

3 questions with open answers (5 points each) + 15 multiple-choice answers quiz (1 point each answer, no penalty for errors)

## Textbooks and Reading Materials

Turner, R.K., Pearce, D.W., Bateman, I. Environmental economics (available at the University library).

Recommended reading:

- Daly, H.E. 2023. *Verso un'altra economia. Scritti per un futuro sostenibile*. Roma: Carocci.
- Nespor, S. 2020. *La scoperta dell'ambiente. Una rivoluzione culturale*. Bari: Laterza.

Other material, including articles in both English and Italian, will be suggested during the course.

## Semester

Second semester

## Teaching language

Italian

## Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | CLEAN WATER AND SANITATION | AFFORDABLE AND CLEAN ENERGY | DECENT WORK AND ECONOMIC GROWTH | INDUSTRY, INNOVATION AND INFRASTRUCTURE | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION | LIFE BELOW WATER | LIFE ON LAND | PARTNERSHIPS FOR THE GOALS