UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Environmental Economics and Regulation

2526-1-F7603Q001

Aims

This course provides the knowledge relevnt for the implementation of sustainability in terms of microeconomic aspects as well as regulartory aspects, in an integrated fashion using shared case studies.

The module in microeconomics will advance microeconomic concepts in the context of sustainabily, detailing the economic principles governing the environment, the issues related to market failures and possible economic interventions.

The module on environmental regulation provides an in-depth analysis of international environmental regulation, focusing on legal principles, treaties, institutional frameworks, and compliance mechanisms. It explores key multilateral environmental agreements (MEAs), climate change law, and the intersection of international environmental law with economic and trade considerations. The course will also discuss contemporary challenges such as biodiversity loss, marine protection, and the role of corporations in environmental governance.

Knowledge and understanding
At the end of the course the student will have a fundamental understanding of:
• foundational principles and sources of international environmental law;
• economic principles governing the environment;
• impact of market failures on sustainability;
• possible economic interventions for fostering sustainability.

Applying knowledge and understanding
At the end of the course the student will be able to:
• analyze major international treaties and regulatory frameworks;
• evaluate the role of international organizations in environmental governance;
• assess the effectiveness of environmental impact assessment (EIA) procedures;
• examine the interaction between trade, investment, and environmental law;
• analyze connections between envionmental parameters and economic key figures;
• analyze market failures;

• design economic interventions for fostering sustainability.

Making judgements
At the end of the course the student will be able to:
• apply the acquired knowledge in various contexts;
• transfer the concepts and approaches introduced in a certain context to connected and new fields if advantageous or fruitful;
• understand the contexts to judge which sustainability-related regulations apply;
• decide which microeconomic theories are suitable to explain specific cases.

Communication skills
At the end of the course the student should be able to
• analyse problems in the ares covered by the course in a clear and concise way;
• explain orally with a suitable language the various topics covered in the course;
• discuss emerging challenges in environmental regulation and climate change mitigation;
• discuss microeconomic aspects related to or relevant for sustainability.

Learning skills
At the end of the course the student should be able to:
• follow new developments in terms of sustainability-related regulation and environmental regulations;
• apply microeconomic concepts in emerging sustainability-related aspects and adapt them to the specific cases.

Contents

• Fundamental economics concepts for the analysis of the environment.
• The design of environmental policies.
• Valuing the environment.
• The practice of environmental economics.
• General principles of international environmental law, including precautionary and polluter-pays principles.
• The legal framework governing environmental impact assessments (EIA) and public participation.
• Key multilateral environmental agreements (MEAs) on biodiversity, marine protection, and pollution control.
• Climate change law, focusing on the UNFCCC, Paris Agreement, and emissions trading mechanisms.
• The intersection of trade, investment, and environmental regulation, including WTO law and ISDS.
• Corporate environmental responsibility, human rights implications, and climate litigation.
• Emerging environmental challenges such as geoengineering, technology in governance, and environmental protection during armed conflicts.
• The future of international environmental governance and regulatory reform proposals.

Detailed program

Fundamental economics concepts for the analysis of the environment
• the theory of externalities;
• environmental problems and policy issues;
• the theory of environmental policy.

The Design of environmental policy
• imperfect information;
• competitive and non-competitive output markets;
• environmental taxation;

• regulation and pollution control;
• cap and trade programs;
• technological innovations and the green transition;
• the international perspective.

Valuing environmental goods
• applied welfare analysis;
• revealed preference models;
• discrete choice models;
• recreation;
• property value models;
• stated preference models;
• the evaluation of health.

The practice of Environmental economics
• the theory of Cost-benefit analysis;
• the empirics of cost-benefit analysis.

The origins and evolution of international environmental law

Sources of international environmental law

Key case law concerning the identification of general principles and role of international courts and tribunals (ICJ, ITLOS, WTO Appellate Body, Investor-State Dispute Settlement (ISDS))

The general principles of IEL
• precautionary principle;
• the Polluter-pays principle;
• the Prevention principle;
• sustainable development and intergenerational equity;
• common but differentiated responsibilities (CBDR).

Concept and legal framework of EIA, Strategic Environmental Assessment (SEA)

Role of stakeholders and indigenous rights

Overview of major MEAs
• CBD Convention;
• UNCLOS;
• CITIES;
• Ramsar Convention;
• Basel Convention;
• Montreal Protocol;
• United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol;
• The Paris Agreement and Nationally Determined Contributions (NDCs).

Carbon markets and the role of emissions trading schemes

Climate litigation and liability in international law

Relationship between WTO law and environmental protection

Green subsidies and trade-related environmental measures

Investor-State Dispute Settlement (ISDS) and environmental protection

Role of multinational corporations in environmental governance

Due diligence and environmental obligations in international business law

Climate change litigation against corporations

The role of new technologies (geoengineering, carbon capture, AI in environmental governance)

The impact of armed conflicts on environmental protection

The future of global environmental governance and reform proposals

Prerequisites

• Basic principles of mathematics.
• Basic principles of analytical methods.
• Basic knowledge of legal concepts.

Teaching form

8 CFU of theoretical lessons (64 hours):
• 16 two-hour lectures, in person, mostly frontal teaching and discussion in class, Delivered Didactics.
• 16 two-hour lectures, online, mostly frontal teaching and discussions, Delivered Didactics.

4 CFU, of mixed didactics in the classroom (32 hours):
• 16 two-hour lectures, in person, including group presentations, group debates, reading of relevant material in class, and possible integration of guest lectures by experts in the field, Interactive Teaching/Mixed Didattics.

Attendance to lectures and interactive sessions is highly recommended.

Textbook and teaching resource

• Phaneuf DJ, Requate T., A Course in Environmental Economics: Theory, Policy, and Practice. Cambridge University Press; 2023.
• Slides and notes.
• Additional reading materials, including scientific articles and reports, caselaw, available on the e-learning platform.

Semester

II semester (March - June)

Assessment method

The final examination will take the form of an oral group presentation (module Environmental Regulation) and a oral interview comprising both modules, in form of a discussion about the topics of the lessons.
Regarding the presentation in class for the module Environmental Regulation: obligatory presentation of about 15 minutes on a subject selected from a list of topics that the lecturer will present at the middle of the semester. This presentation will count for 15% of the final grade.

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

Students are asked to refer to the indications provided in the syllabi of the modules.

Sustainable Development Goals

QUALITY EDUCATION | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION | LIFE BELOW WATER | LIFE ON LAND | PEACE, JUSTICE AND STRONG INSTITUTIONS