

EVA Module Outline

First teaching: Environmental economics

Cavalletti - 14 ore

General introduction to Environmental economics: scarcity, resource allocation and optimization; non-renewable resources; policies for renewable resources, replenishment of natural capital and scarcity. Economic analysis of collective choices: economic evaluation of costs and benefits; revealed preferences and contingent valuations; stated preferences, travel costs and hedonic prices; cost benefit analysis; multi-criteria decision-making; q-methodology. The economics of biodiversity: ecosystem functions and ecosystem services.

Seminar: Coordination of environmental science, policy and finance programs within the sustainable development goals and EU directives on habitats and biodiversity

Mastrojeni - 8 ore

The seminar will discuss the main challenges to a sustainable development and the strategies and policies that are being adopted at the international level that encompass ecological, economic and political sciences. It will also be illustrated the complex relationship between governments and science (in particular, climate change) and how science can help in the policy decision-making process.

Seminar: Biodiversity and policy: sustainable development goals and EU directives on habitats and biodiversity

Minetti - 6 ore

The seminar will discuss the main challenges to a sustainable development and the strategies and policies that are being adopted at the international level that encompass ecological, economic and political sciences. It will also be illustrated the complex relationship between governments and science (in particular, climate change) and how science can help in the policy decision-making process.

Second Teaching: Empirical methods for environmental economics

Lagazio – 6 ore

Statistical methods for environmental analysis and evaluation. Survey methodology: sampling; questionnaires; estimation methods. Multi-criteria analysis. Expert choice.

Seminar: European tools and models for sustainable growth

Minetti - 2 ore

The seminar instructs attendants on different strategic tools commonly used in the context of sustainable development by EU members (e.g. ISO 14000, Ecolabel, Emas). It will also briefly discuss participative methods for local governance.

Third teaching: Environmental accounting: general framework and the protected areas case

Ramassa – 8 ore

Students will learn about the rules and conventions of economic-environmental accounting currently adopted at an international and European and national level. Moreover, students are introduced to the concepts and the tools to implement reporting systems that provide information useful for evaluating the flows of benefits/costs in the context of ecosystems and protected areas. After completing this class, they are able to select data of different nature (inputs expressed as monetary values as well as physical units) to implement accounts and

reporting tables. Additionally, they are able to interpret intermediate and overall margins in reporting tables to answer to issues concerning the management of protected areas.

Seminar: Environmental accounting and ecosystem services: the latest developments

La Notte – 4 ore

The seminar covers the main advancements in cutting-edge European research on environmental accounting, presenting theoretical perspectives, new methods and latest results. Particular attention is devoted to the illustration of the methodology adopted in the KIP INCA project, forefront of the European studies on ecosystem accounting.

Fourth teaching: System ecology and computer sciences: new frontiers for ecological economics

Vassallo – 12 ore

The fundamentals of system ecology and computer science tools for ecology issue will be introduced. In particular, system methodologies such as emergy analysis will be explained and practical cases of application in the field of natural capital and ecosystem services evaluation will be presented. Moreover, students will be trained about the employment of environmental informatics in order to collect, storage, analyse and visualize information and in order to create management tools for policy markers and territorial managers. Finally, students will be shown the learnt tools and knowledge can be applied to the special case of protected areas.

Seminar: Latest developments in ecosystem accounting, impact on policy making and the main issues in its application

La Notte – 4 ore

This seminar provides an overview on how Natural Capital accounting and integrated reporting systems at EU level can impact decision making processes on a European and national scale in terms of natural resource management and biodiversity conservation. It will also illustrate the issues still on the table regarding ecosystem accounting implementation.

Final conference: Biodiversity and the measurement of its contribution to human activities – 4 ore

The conference will be held in a prestigious contest, either in Genova or in sites that are relevant for the course topics (e.g. the head offices of the agency for the protected area of Portofino or the conference rooms of the Regional Government of Liguria). It will be an open event, directed to students, academic staff, Public Officials, administrators and organizations of the civil society. The Module staff will present the core issues discussed during the Module, with a strong focus on policy implications.