

Syllabus

Course description

Course title	Sustainability Economics
Course code	27611 (27516 in LM Data)
Scientific sector	SECS-P/02 (Secs-P/05 in LM Data)
Degree	Master in Public Policy and Innovative Governance (LM-63)
Semester and academic year	1 semester - 2025/2026
Year	2nd study year
Credits	6
Modular	No

Total lecturing hours	36
Total lab hours	-
Total exercise hours	-
Attendance	Attendance is recommended but not mandatory.
Prerequisites	B1 level in English is required to sit the exam.
Course page	https://www.unibz.it/en/faculties/economics-management/master-public-policy-innovative-governance/course-offering/

Specific educational objectives	<p>The course refers to the typical educational activities and belongs to the scientific area of Economics (SECS-P/02).</p> <p>The course will provide a general and applied overview of modern sustainability economics. It will focus on a short list of core concepts with a special focus on economic and statistical analysis at the intermediate level. Part I will start with the economic theory of environmental policy. It will cover the ways in which markets fail to efficiently allocate resources in the presence of externalities along with policies used to correct those failures. Part II will focus on the statistical methods used by economists to quantify the values of environmental commodities. Knowing these values is a necessary precondition for properly applying the policies covered in Part I. Moreover, it will cover recent statistical approaches to identify the causal effects of environmental policies described in Part I.</p> <p>Students acquire a broad knowledge in the field of sustainability economics and develop an economic intuition by means of examples and empirical applications. Students understand, among others, how to formulate and solve problems of sustainability using economic theory. Most importantly, students will not only</p>
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	be able to solve these models analytically, but also able to use state-of-the-art statistical methods to identify the effect of environmental policies and value environmental commodities.
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Lecturer	TBA
Scientific sector of the lecturer	TBA
Teaching language	English
Office hours	18
List of topics covered	Environmental Economics and the Theory of Externalities; Environmental Problems and Policy; Design of Environmental Policy; Quantitatively Valuing the Environment; Assessing the Effectiveness of Major Environmental Policies.
Course Outline	<ol style="list-style-type: none"> 1. Environmental Economics and the Theory of Externalities (Market Failures, Formal Models of Externalities) 2. Environmental Problems and Policy Issues (Major Pollutants and Pollution Problems, Economics and Ecology, Policy Examples) 3. Theory of Environmental Policy (Damages and Costs, Property rights, Environmental Policy Instruments, Aggregate Marginal Abatement Cost Curve) 4. Design of Environmental Policy (Imperfect Information, Competitive and Non-Competitive Output Markets). 5. Quantitatively Valuing the Environment (Applied Welfare Analysis, Revealed Preference Models, Discrete Choice Models, Property Value Models, Health Valuation, Cost-Benefit Analysis: Models and Empirical Calibration). 6. Quantitatively Evaluating the Effects of Major Environmental Policies (such as pollution taxes, cap-and-trade systems, and energy efficiency regulations).
Teaching format	Frontal lectures, exercises, computer labs, face-to-face discussions and flipped-classroom activities.

Learning outcomes	<p>Knowledge and understanding Students will know and understand analytical and quantitative tools used in environmental and sustainability economics and acquire knowledge on the theory of externalities with empirical applications to environmental and sustainable development, and sustainable resource use.</p> <p>Applying knowledge and understanding</p>
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	<p>Students will be able to comprehend and apply research contributions. They will learn how to interpret theoretical ideas and applied research results. Moreover, students learn to apply useful data analytical skills, including valuation and econometric / causal inference methods, in the context of sustainability economics.</p> <p>Making judgments Student will be able to reflect on specific problems and formulate judgments that include a quantitative valuation of environmental commodities and evaluation of environmental policies.</p> <p>Communication skills Students will be able to communicate content, key concepts, research ideas, problems and solutions as well as empirical research results to both a specialist and non-specialist audience.</p> <p>Learning skills Students will develop the ability to connect economic theory with real-world sustainability challenges. This entails independently expanding their understanding through in-depth engagement with scientific research and empirical analyses. They will cultivate skills essential for conducting thorough literature reviews and formulating precise research questions.</p>
<p>Assessment</p>	<p>For Attending students:</p> <ul style="list-style-type: none"> I) Project assignment (40% of the final grade). The project assignment requires the critical replication of existing empirical research in sustainability economics. II) Final exam (60% of the final grade). The final exam consists of analytical problems and the interpretation of quantitative research results. <p>The final exam tests Skill 1 (Knowledge and understanding). The project assignments allows to verify Skills 2, 3 and 4 (Applying knowledge and understanding, Making judgements, Communication skills). The skill concerned with autonomous study (Skill 5, Learning skills) is indirectly verified, because passing the final exam requires autonomous execution of exercises suggested by the lecturer as well as individual preparation to the class discussions and flipped-classroom activities.</p>

	For non-attending students or students who do not take the project assignment, the final exam is 100% of the final grade.
Assessment language	English
Evaluation criteria and criteria for awarding marks	Evaluation criteria relevant for both project assignment and exam: correct procedure and solution. In addition, solutions to problems require the ability to summarize, evaluate, and demonstrate critical thinking.
Required readings	A Course in Environmental Economics: Theory, Policy, and Practice by Daniel J. Phaneuf and Till Requate (any edition)
Supplementary readings	The lectures will draw from journal articles. Additional literature will be given during class.