Core Economics and Sustainable Development I

Educational subject description sheet

Basic information

Field of study Joint Bachelor in Sustainability	**Education cycle** 2025/26
Speciality Geography & Economics	**Subject code** UJ.WPAJBSGECS.840.16517.25
Organizational unit Faculty of Law and Administration	**Lecture languages** english
Study level first cycle (joint degree programme)	**Subject related to scientific research** Yes
Study form full-time degree programme	**Disciplines** Economics and finance
Education profile General academic	**ISCED classification** 0311 Economics
Mandatory obligatory	**USOS code**

Subject coordinator	Piotr Szwedo
Lecturer	Omar Joya, Tom Van Puyenbroeck

Period Semester 3	**Examination** exam **Activities and hours** Discussion class: 45	**Number of ECTS points** 5.0

Goals

C1	First steps in the track: getting acquainted with key disciplinary notions and concepts in order to apply them to sustainability studies. First approach of the links between nature and economy

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	the concept of sustainability and recognize the differences in relevant definitions, models and approaches.	JBS_K1_W01	written exam
W2	theory and methodology of disciplines included in the selected specialisation track to sustainability-related problems, taking into consideration practical limitations such as protection of intellectual property.	JBS_K1_W07	written exam
Skills – Student can:			
U1	demonstrate considerable entrepreneurial initiative, autonomy, and readiness to act in complex and changing environments, especially in the context of supporting, undertaking, and co-organising activities beneficial for a sustainable society.	JBS_K1_U04	written exam
U2	apply adequate methods and tools, including selected IT tools, to solve problems related to data collection, analysis, and management in the context of sustainability.	JBS_K1_U03	written exam
Social competences – Student is ready for:			
K1	to consider different visions of the future and develop own evidence-based opinions in reference to the balance of values linked to economic development, social welfare, and environmental protection.	JBS_K1_K03	written exam

Calculation of ECTS points

Activity form	Activity hours*
Discussion class	45
problem analysis	45
preparation for the exam	30
preparation for classes	15

Student workload	Hours	ECTS
	135	5.0

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes
1.	Section 1: Macroeconomics I. • Introduction to natural resource and environmental economics • Welfare economics and the environment • Pollution control: targets and instruments • Valuing the environment • International environmental problems	W1, W2, U1, K1
2.	Section 2: Environmental economics I. 1. Introductions 1.1. A Historical Perspective on Living Standards • The hockey-stick diagram of income growth • Technological revolution and its impact on productivity 1.2. The Economy and the Environment • How does the economy relate to the physical environment (biosphere and natural resources)? • Mutual effect between human economic activities and the environment (climate change, deforestation, etc.) • Circular flow of the economy incorporating the biosphere & natural resources 1.3. What is Economics? • A more intuitive definition of economics and how it may relate to environment and sustainability. 2. National Income Accounts, and the Environmental Accounting 2.1. Gross Domestic Product 2.2. Environmental Accounting: Green GDP?	W1, W2, U1, U2, K1
3.	3. Measuring National Income 3.1 Gross National Income, and Savings 3.2 Sustainable National Net Income (SNNI) 3.3 Real GDP, Price Indices, and Inflation	W1, W2, U1, U2, K1

No.	Course content	Subject's learning outcomes
4.	4. Productivity, Output, and the Economy 4.1 The Production Function 4.2 Demand of Labor 4.4 Unemployment 5. Money, Banks and the Credit Market 5.1 What is money? 5.2 Demand for money 5.3 Money growth and Inflation 5.4 Borrowing and Consumption Smoothing 5.5 Banks money and the Central Bank 5.6 Credit market constraints	W1, W2, U1, K1
5.	6. The IS-LM/ AD-AS Model 6.1 Equilibrium in the Goods Market 6.2 Asset Market Equilibrium 6.3 General Equilibrium: IS-LM 6.4 Aggregate Demand & Supply	W1, W2, U1, U2, K1
6.	Section 3: Microeconomics I. • Market equilibrium for dummies • What’s underneath? A: technology, cost functions, economies of scale and scope • What’s underneath? B: the profit maximizing firm • What’s underneath? C: essentials of consumer behavior • Playing with building blocks: price discrimination, intertemporal consumption and other variations on the theme • Homo economicus • Sustainability and production economics • Sustainability and consumer theory	W1, W2, U1, K1

Course advanced

Teaching methods :

text analysis, brainstorming, conversation lecture, practicals

Activities	Examination methods	Credit conditions
Discussion class	written exam	Active participation (non-graded), written exam based on open questions (graded).

Entry requirements

None

Literature

Obligatory

1. Core Econ Team (2024), The Economy 1.0, url : https://www.core-econ.org/project/core-the-economy/
2. Core Econ Team (2024), Economy, Society, and Public Policy, url : https://www.core-econ.org/project/core-espp/

Effects

Code	Content
JBS_K1_K03	The graduate can consider different visions of the future and develop own evidence-based opinions in reference to the balance of values linked to economic development, social welfare, and environmental protection.
JBS_K1_U03	The graduate can apply adequate methods and tools, including selected IT tools, to solve problems related to data collection, analysis, and management in the context of sustainability.
JBS_K1_U04	The graduate can plan and effectuate simple sustainability-related projects under supervision and in the context of personal lifelong learning, both individually and in a team, using appropriate transversal skills and taking shared responsibility for the outcome.
JBS_K1_W01	The graduate can describe the concept of sustainability and recognize the differences in relevant definitions, models and approaches.
JBS_K1_W07	The graduate can apply the theory and methodology of disciplines included in the selected specialisation track to sustainability-related problems, taking into consideration practical limitations such as protection of intellectual property.