Circular and Ecological Economics

Educational subject description sheet

Basic information

Field of study Joint Bachelor in Sustainability	**Education cycle** 2025/26
Speciality Economics, Management & Engineering	**Subject code** UJ.WPAJBSEMES.8100.16494.25
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, Earth sciences and the environment
Education profile General academic	**ISCED classification** 0311 Economics
Mandatory obligatory	**USOS code**

Subject coordinator	Piotr Szwedo
Lecturer	Johan Eyckmans, Lola Domiguez Garcia

Period Semester 5	**Examination** exam **Activities and hours** Lecture: 20	**Number of ECTS points** 2.0

Goals

C1	The goal is to provide students with a strong understanding of how the economy and the environment are interconnected, and how we can move towards a more sustainable economic model that preserves natural resources and enhances long-term human well-being.

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	key concepts and basic principles of Ecological Economics and Circular Economy.	JBS_K1_W01, JBS_K1_W02	written exam
W2	the differences between the environmental and the ecological approach as well as the trade-offs between economic growth and environmental sustainability	JBS_K1_W01, JBS_K1_W02, JBS_K1_W03	written exam
W3	how to apply ecological approach to the analysis of a particular ecosystem.	JBS_K1_W01, JBS_K1_W02, JBS_K1_W03, JBS_K1_W04	written credit
W4	market failures in the context of (non)renewable resources	JBS_K1_W03, JBS_K1_W06, JBS_K1_W07	written exam
Skills – Student can:			
U1	analyse and evaluate economic models and ethical considerations related to ecological economics	JBS_K1_U01, JBS_K1_U02, JBS_K1_U04	written exam, written credit
U2	determine the optimal level of environmental quality and public goods from a society point of view and compare it to market outcome in the context of resource management	JBS_K1_U03	written exam
U3	build an argumentation to justify the use of particular policy instruments	JBS_K1_U03	written exam
Social competences – Student is ready for:			
K1	to critically valorise whether economic growth is possible under the ecological approach.	JBS_K1_K03, JBS_K1_K04	written exam, written credit
K2	to take a position on what sort of economic system is needed and/or possible	JBS_K1_K03, JBS_K1_K04	written exam
K3	to recognize the importance of equity when designing policy interventions related to resource management	JBS_K1_K03	written exam

Calculation of ECTS points

Activity form	Activity hours*
Lecture	20
preparation for the exam	20
semester paper preparation	20

Student workload	Hours	ECTS
	60	2.0

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes
1.	Circular economy: definition, indicators, EU CE policy framework	W1
2.	Circular economy: renewable resources (fisheries, forestry)	W1, W3, W4, U2
3.	Circular economy: non-renewable resources, scarcity, Hoteling model	W1, W4, U2
4.	Circular economy: policy instruments (EPR, deposit-refund systems, ...)	W1, W4, U3, K3
5.	Circular economy: business models	W1
6.	Ecological Economics: Introduction to basic concepts	W1
7.	Ecological Economics: a new approach to understand the relations between economy and environment	W1, W2, U1
8.	Ecological economics, nature, society and economy (part I).	W1, W2, W3, U1, U3, K1, K3
9.	Ecological economics, nature, society, and economy (part II).	W1, W2, W3, W4, U1, U3, K1, K2, K3
10.	Ecological Economic, the case of agroecosystems	W1, W2, W3, W4, U1, U3, K1, K2, K3

Course advanced

Teaching methods :

lecture with multimedia presentation, discussion, case study

Activities	Examination methods	Credit conditions
Lecture	written exam, written credit	Final exam: Individual test over basic concepts and theories developed during lectures; Final assignment: Writing of a final assignment of 1500 works (+/-10%) in groups of maximum 3 persons, using APA 7 Style. The topic selection will be proposed by the teacher.

Entry requirements

None

Literature

Obligatory

1. Compulsory and recommended teaching and reading material will be made available via the digital learning platform.

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_K04	The graduate can critically assess and verbalize own competencies and skills related to different aspects of sustainability as well as their need for development.
JBS_K1_U01	The graduate can critically analyse academic literature, formulate research questions and conduct research under supervision.
JBS_K1_U02	The graduate can present and report knowledge, methodologies, ideas, problems and solutions, clearly and comprehensively, in different forms destined for different audiences – including discussions and debates which require defending a substantiated opinion, as well as conversations in a foreign language at the CEFR B2 level.
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_W02	The graduate can explain the axiological background of sustainability and summarize key stages of development of the concept.
JBS_K1_W03	The graduate can give examples of sustainability-related dilemmas and hypothesize on the optimal course of action.
JBS_K1_W04	The graduate can identify sustainability-related problems specific to selected cultural, geographical, and political contexts.
JBS_K1_W06	The graduate can describe interconnections between various aspects of sustainability and identify their significance in the context of natural and social sciences, with a special focus on disciplines included in the selected specialisation track (law and politics; chemistry and physics; chemistry and biology; economics and geography; economics, management and engineering; humanities).
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.