Systemic Analysis of Environmental Issues 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.880.16522.25
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** Socio-economic geography and spatial, Earth sciences and the environment
Education profile General academic	**ISCED classification** 0588 Interdisciplinary programmes involving broad field 05
Mandatory obligatory	**USOS code**

Subject coordinator	Piotr Szwedo
Lecturer	Romain Courault, Gustavo Romanillos, Simon Sanchez Moral, Cristina Montiel Molina

Period Semester 4	**Examination** exam **Activities and hours** Discussion class: 45	**Number of ECTS points** 5.0

Goals

C1	To be able to recognise regional manifestations of climate change in Europe, understand policies related to mobility, water and energy

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	the stakes of sustainability issues in an urban context; and can recognise specific regional and contextual aspects of climate change	JBS_K1_W01, JBS_K1_W07	written exam
W2	what the policy and decision-making agencies, and the current policies regarding water and energy are	JBS_K1_W02	written exam
Skills – Student can:			
U1	suggest adapted solutions for sustainable planning, transport and resource management	JBS_K1_U03	written exam
U2	analyse energy-related policies, present conclusions and anticipate future implications of energy and water-related policies; analyse impact of climate change on human health, food systems and biodiversity	JBS_K1_U02	written exam
Social competences – Student is ready for:			
K1	to efficiently take into account specific data in order to assess and suggest innovative solutions	JBS_K1_K05	written exam
K2	to understand and consider different consequences of policies and to develop a personal opinion on the matter	JBS_K1_K03, JBS_K1_K04	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** 135	**ECTS** 5.0

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes
1.	Section 1: Sustainable Development of Urban areas 3.3.19 • Overview of Sustainable Development Goals and their relevance for urban areas • Follow-ups: urbanization and its impacts • Urban planning and design for sustainability • Sustainable transportation systems, and mobility • Follow-ups: green infrastructures and urban resilience • Sustainable energy production/consumption & Resource management • Social equity & inclusive development • Governance, partnerships, and policies	W1, U1, K1
2.	Section 2 : Geography and geopolitics of energy and water supply/demand 3.3.20 • Intro to energy and water geopolitics • Global energy resources and distribution • Global water resources and management • Interconnection between water and energy • Energy and water security • Renewable energies, and water efficiency • Energy and water diplomacies • Future trends, and policy implications	W2, U2, K1
3.	Section 3 : Regional effects of current climate change on European societies, human health and ecosystems 3.3.21 • Introduction to regional manifestations of climate change in Europe • Climate change and extreme weather events • Regional impacts on agriculture and food security • Climate change and human health • Climate change and urban environments • Climate change and biodiversity loss • Socio-economic impacts and disparities • European, national and infra-national policy responses and adaptation strategies	W1, U2, K2

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. Materials provided during the class and additional literature suggested by the lecturer

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_K05	The graduate can defend the importance of scientific data and methods as a basis for decision-making.
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_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_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.