COURSE DESCRIPTION CARD - SYLLABUS

Course name
EDUCATION FOR SUSTAINABLE DEVELOPMENT IN HIGHER EDUCATION (1) [S5SD1>ESDSW1]

Course

Proposed by Discipline
–

Year/Semester
1/1

Level of study
Doctoral School

Course offered in
English

Form of study
full-time

Requirements
elective

Number of hours

Lecture
8

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

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Prerequisites

Basic understanding of sustainable development and Education for Sustainable Development, as well as awareness of contemporary environmental, social and economic challenges.

Course objective

The aim of the course is to develop the knowledge, skills and competences required to understand and support the green transformation of higher education. Participants develop an understanding of systemic relationships between climate change, climate policies and regulations, economic and labour market transformation, and changing competence needs. Particular emphasis is placed on the role of universities in Education for Sustainable Development, the development of green competences, responsible resource management and cooperation with the socio-economic environment. The course also prepares participants to critically evaluate information and to design actions supporting the sustainable transformation of universities using selected analytical, improvement and digital tools.

Course-related learning outcomes

KNOWLEDGE
The participant:

1. explains systemic relationships between climate change, the green transition and socio-economic transformations [P8S_WK / SzD_W05]
2. characterises key climate policy directions and EU regulations affecting the economy, labour market and competence needs [P8S_WK / SzD_W06]
3. explains the importance of ESD, GreenComp and the SDGs for higher education [P8S_WK / SzD_W05]
4. recognises the role of universities in developing green competences and implementing the Whole-Institution Approach [P8S_WK / SzD_W07]
5. explains the importance of the Green Campus and Living Lab concepts and of cooperation between universities and their socio-economic environment [P8S_WK / SzD_W07]

SKILLS
The participant:
1. analyses the impact of the green transition on university operations and the competences required by graduates [P8S_UW / SzD_U01]
2. identifies relationships between regulations, changes taking place in the economy and competence needs [P8S_UW / SzD_U01]
3. uses GreenComp to identify competences relevant to sustainable development [P8S_UU / SzD_U10]
4. identifies problems and resource waste and selects basic improvement tools, including 5 Why, Pareto analysis and PDCA [P8S_UW / SzD_U01]
5. analyses stakeholders and designs activities engaging the academic community and the university's external environment [P8S_UW / SzD_U03]
6. uses AI tools to search for, analyse and critically verify information related to sustainable development [P8S_UW / SzD_U02]

SOCIAL COMPETENCES
The participant:
1. is prepared to initiate and support sustainable development activities in the academic environment [P8S_KO / SzD_K05]
2. makes decisions taking into account their environmental, social and economic consequences [P8S_KO / SzD_K04]
3. is prepared to engage in interdisciplinary and cross-functional cooperation in solving complex problems [P8S_KK / SzD_K03]
4. critically evaluates information, arguments and environmental claims, including the risks of greenwashing and disinformation [P8S_KK / SzD_K01]
5. demonstrates responsibility for the rational use of resources and continuous improvement of activities [P8S_KO / SzD_K04]
6. recognises the importance of shared responsibility among staff, students and external stakeholders for the university's green transformation [P8S_KO / SzD_K04]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Final assessment test. Successful completion of the course requires obtaining at least 50% of the available points.

Grading scale:
90–100% – 5.0
80–89% – 4.5
70–79% – 4.0
60–69% – 3.5
50–59% – 3.0
below 50% – 2.0

Programme content

Systemic determinants of climate change and the green transition and their environmental, social and economic consequences. Climate policy and key European Union regulations supporting the green transition. The impact of the transition on the economy, labour market, demand for green competences and the functioning of higher education. Education for Sustainable Development, ESD for 2030, the Sustainable Development Goals (SDGs) and the European GreenComp competence framework. The role of

universities and university staff in the green transition, including the Whole-Institution Approach, Green Campus and Living Lab concepts. Responsible use of resources and selected diagnostic and continuous improvement tools. Cooperation between universities and the socio-economic environment and stakeholder engagement in sustainable development activities. Critical evaluation of information, greenwashing, disinformation and the use of AI tools to support analysis, communication and learning.

Course topics

1. Climate change as a systemic challenge
Causes and mechanisms of climate change, key climate indicators and GHG emissions, environmental, social and economic impacts, mitigation and adaptation, physical and transition risks, and the impact of climate change on the economy and labour market.

2. Green transformation of the economy
The Paris Agreement and climate targets, the European Green Deal, climate neutrality and decarbonisation, energy transition, the circular economy, just transition, labour market transformation and demand for green skills.

3. EU regulations as a driver of the green transition
European Climate Law and Fit for 55, EU ETS, ETS2 and CBAM, RED III, EED and EPBD, EU Taxonomy, CSRD and ESRS, CSDDD, and regulations concerning the circular economy and biodiversity. Links between regulation, sectoral transformation and changing competence needs.

4. The university in the green transition
The impact of the transition on higher education, changing expectations towards universities and graduates, the green skills gap, the Whole-Institution Approach, education, research, campus operations and external engagement, the university as a Living Lab, and cooperation with business and the socio-economic environment.

5. ESD and green competences
Education for Sustainable Development, ESD and environmental education, ESD for 2030, SDGs in higher education, GreenComp, systems thinking and critical thinking, futures literacy, and individual and collective agency.

6. The role of university staff in the green transition
The role of university staff as participants and initiators of change, individual and institutional responsibility, development of green and transformational competences, interdisciplinary and cross-functional cooperation, decision-making under complexity and uncertainty, greenwashing, disinformation, evidence-based decision-making, and AI as a tool supporting analysis, communication and learning.

7. Green Campus as a transformation laboratory
The university as a catalyst for transformation, energy, water, waste, mobility and resources, the campus as a source of real-life challenges, engagement of staff and students, identification of resource waste, and the use of 5 Why, Pareto analysis and PDCA.

8. The university in the socio-economic ecosystem
Stakeholder mapping, local challenges as opportunities for learning and action, Service Learning and Challenge-Based Learning, cooperation with business, local government and NGOs, interdisciplinary projects, Theory of Change and Impact Mapping, and the transition from a problem to measurable results and impact.

Teaching methods

Lecture with workshop elements, discussion and case analysis. Analysis of strategic and regulatory documents and practical examples. Workshop and problem-solving tasks using selected analytical and improvement tools, including GreenComp, 5 Why, Pareto analysis, PDCA, stakeholder mapping, Theory of Change and Impact Mapping. Individual and group work on selected problems related to sustainable development and the green transformation of universities. Use of AI tools for information search, analysis and critical verification.

Bibliography

1. UNESCO, Education for Sustainable Development: A Roadmap, UNESCO, Paris, 2020.
1. Bianchi G., Pisiotis U., Cabrera Giraldez M., GreenComp: The European Sustainability Competence Framework, Publications Office of the European Union, Luxembourg, 2022.
3. United Nations, Transforming our World: The 2030 Agenda for Sustainable Development, United Nations, New York, 2015.
4. European Commission, The European Green Deal, COM(2019) 640 final, Brussels, 2019.
5. IPCC, Climate Change 2023: Synthesis Report, Intergovernmental Panel on Climate Change, Geneva, 2023.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	8	0,50
Doctoral student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation)	17	0,50