



EU-CONEXUS Micro-credentials in SmUCS Catalogue

Spring 2024/2025

The table below presents all the courses that will be offered in a synchronous teaching mode in Spring semester of academic year 2024/2025.

Sector	Thematic area	Micro-credential title	Starting month	ECTS	Application dates	Delivery mode	Host university
Coastal	Anatomy of coastal areas	Build with nature – techniques for sandy coasts	April 2025	1	13/01-12/03/2025	Online	Klaipeda University, Lithuania
	Coastal risks and protection	Spatial planning and climate risk mitigation for resilient coastal areas	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	Coastal tourism	Underwater cultural heritage as a tourist resource	March 2025	1	13/01-12/02/2025	Online	University of Zadar, Croatia
	Ecosystem services	Marine ecosystem services and the impact of the Invasive Alien Species in the Mediterranean Sea	May 2025	1	13/01-03/04/2025	Online	Agricultural University of Athens, Greece
	Water management	Environmental monitoring and indicators	May 2025	1	13/01-03/04/2025	Online	Agricultural University of Athens, Greece
European	Blue economy	Entrepreneurship in Blue Economy	March 2025	1	13/01-12/02/2025	Online	University of Rostock, Germany
	European funding instruments	Funding opportunities for young researchers: From idea to funding	April 2025	1	13/01-12/03/2025	Online	Agricultural University of Athens, Greece
	European identity and its transformation	Visual culture	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	European environmental policies	Towards a green European industrial policy	March 2025	1	13/01-12/02/2025	Online	Catholic University of Valencia, Spain

European	Intercultural communication/multilingualism	Landscapes for exploring language and culture	May 2025	1	13/01-03/04/2025	Online	Catholic University of Valencia, Spain
Smart	Games and gamification	Games and gamification	March 2025	1	13/01-12/02/2025	Online	University of Zadar, Croatia
	Cognitive systems and neuroscience	Neuroscience and artificial intelligence	March 2025	1	13/01-12/02/2025	Online	Catholic University of Valencia, Spain
	Digital humanities	Using AI when working with very large document collections: opportunities and risks	March 2025	1	13/01-12/02/2025	Online	La Rochelle Université, France
	Sustainable IT	UAS principles, data modelling and analysis	May 2025	1	13/01-03/04/2025	Online	Technical University of Civil Engineering Bucharest, Romania
	Climate change and resilience	Climate adaptation engineering	May 2025	1	13/01-03/04/2025	Online	La Rochelle Université, France
Sustainability	Green skills	Green competences 4 all	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	Social Entrepreneurship and Commitment	Social Entrepreneurship and Commitment	April 2025	1	13/01-12/03/2025	Online	University of Rostock, Germany
	Sustainable development goals	SDGs - The Blue Print for the Sustainable Development	March 2025	1	13/01-12/02/2025	Online	Technical University of Civil Engineering Bucharest, Romania
	Sustainable fashion	Making sustainable fashion trendy	April 2025	1	13/01-12/03/2025	Online	Catholic University of Valencia, Spain
	Sustainable management	Management strategies of plan diversity for sustainable development	May 2025	1	13/01-03/04/2025	Online	Catholic University of Valencia, Spain

Sustainability	Technologies for sustainable development	Traditional timber houses carpentry in seismic and coastal areas	April 2025	1	13/01-12/03/2025	Online	Technical University of Civil Engineering Bucharest, Romania
University	Ethics/Bioethics	Animal welfare in research labs	May 2025	1	13/01-03/04/2025	Online	Agricultural University of Athens, Greece
	Information literacy	Information literacy	March 2025	1	13/01-12/02/2025	Online	University of Zadar, Croatia
	Personal leadership development and networking	Principles of Leadership, Teamwork and Communication	May 2025	1	13/01-03/04/2025	Online	Agricultural University of Athens, Greece
	Professional communication and academic writing	AI and Academic Writing Skills: Never the Twain Shall Meet?	April 2025	1	13/01-12/03/2025	Online	University of Zadar, Croatia
	Professional communication and academic writing	Ludic Chinese language learning method with tactile HYP A keyboard	April 2025	1	13/01-12/03/2025	Online	La Rochelle Université, France
	Research and innovation thinking	Research and Innovation Thinking	April 2025	1	13/01-12/03/2025	Online	University of Rostock, Germany
	Research transfer	Translating research into action: Strategies for effective research transfer	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	Environmental and science education	Environmental literature	March 2025	1	13/01-12/02/2025	Online	University of Zadar, Croatia
	Urban	Green mobility and transport	Rail at the European scale in regard with the society transitions	April 2025	1	13/01-12/03/2025	Online
Healthy cities		Change your mind to change your health	April 2025	1	13/01-12/03/2025	Online	Agricultural University of Athens, Greece

Urban	Near zero energy building (NZEB)	Theoretical skills for PV systems installers	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	Urban environmental challenges	Innovations for sustainable urban development	March 2025	1	13/01-12/02/2025	Online	Frederick University, Cyprus
	Smart green cities	Smart green cities: An introduction	May 2025	1	13/01-03/04/2025	Online	Technical University of Civil Engineering Bucharest, Romania

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Below you will find **Micro-credential Cards** that include descriptions of each one of them together with the **timetables**.

They are arranged according to the date of starting the classes.

Translating Research into Action: Strategies for Effective Research Transfer

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Alexandros Argyriadis, Frederick University (Cyprus) hsc.arg@frederick.ac.cy
Sector	University
Thematic area	Research Transfer
EQF level	Level 6 (Bachelor)
ISCED-F field	0319 Social and behavioural sciences not elsewhere classified
ESCO skills & competences	T2.1 – transversal skills and competences – thinking skills and competences - processing information ideas and concepts T2.4 – transversal skills and competences – thinking skills and competences - thinking creatively and innovatively S1.13 – skills – communication, collaboration and creativity - writing and composing
Proposed dates of the classes	06/03, 13/03, 20/03, 27/03, 03/04, 08/05, 18:00-20:00 (CET)
One hour for tutoring consultations	07/04, 18:00-19:00 (CET)
Date of the exam/ final assessment	08/05, 18:00-20:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 11 h Asynchronous hours & self-directed learning: 14 h
General description	<p>The course "Translating Research into Action: Strategies for Effective Research Transfer" is designed to equip participants with the necessary knowledge and skills to bridge the gap between research findings and practical applications. In today's fast-paced world, it is crucial to ensure that valuable research is effectively transferred into actionable solutions that benefit society.</p> <p>Throughout the course, participants will explore various strategies and techniques for translating research outcomes into real-world impact. They will learn how to assess the relevance and applicability of research findings, identify key stakeholders, and develop comprehensive dissemination plans. Additionally, participants will delve into effective communication methods, including crafting clear and concise messages tailored to different audiences.</p>

Description of the content (week by week)	Unit 1. Introduction to Research Transfer Strategies (2 hours) Unit 2. Publishing research outcomes (2 hours) Unit 3. Designing of academic events and activities (2 hours) Unit 4. Commercialization of research outputs (2 hours) Unit 5. Final assessment (2 hours)			
Importance for society	Research transfer bridges the gap between academic knowledge and real-world applications, ensuring that research findings are effectively utilized to address pressing societal challenges. This process enables innovations to be applied in sectors such as healthcare, education, technology, and public policy, leading to improvements in quality of life and societal well-being. By equipping individuals with the skills to translate research into actionable strategies, society benefits from evidence-based solutions to complex problems, fostering sustainable development, equity, and progress. This course emphasizes the critical role of disseminating research outcomes to diverse stakeholders, ensuring accessibility and understanding across various audiences. By enabling the commercialization of research outputs and the design of impactful academic events, the course cultivates the ability to create long-lasting societal benefits. This aligns with the broader goals of fostering resilience, addressing inequalities, and promoting innovation for a better future.			
Skills (hard and soft skills)	Hard skills: Plan Assessment, Sustainability Comprehension Soft skills: Critical Thinking and Creativity, Analytical Skills			
Sustainable Development Goals	SDG3. Good health and well-being SDG 4: Quality Education SDG 8: Decent Work and Economic Growth SDG 9: Industry, Innovation, and Infrastructure SDG 10: Reduced Inequalities SDG 11: Sustainable Cities and Communities SDG 17: Partnerships for the Goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Apply knowledge on the typology and the impact of institutional spatial planning for coastal areas	Personal study Case Study Group discussion	Assignment on a case study	Individual work	Unsupervised with no identity verification

Explain how a specific spatial plan for addresses the issues of resilient coastal area in an integrated/ wholistic approach	Personal study Case Study Group discussion	Oral support of the report in the class	Presentation in front of the colleagues	Unsupervised with no identity verification
Bibliography	<p>Books:</p> <p>Stolovitch, H. D., & Keeps, E. J. (2020). <i>Know-How: The Definitive Book on Skill and Knowledge Transfer for Occasional Trainers, Experts, Coaches, and Anyone Helping Others Learn</i>. Association for Talent Development.</p> <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Ashcraft, L. E., Quinn, D. A., & Brownson, R. C. (2020). Strategies for effective dissemination of research to United States policymakers: a systematic review. <i>Implementation Science</i>, 15, 1-17. 2. Huberman, M. (2021). Changing minds: The dissemination of research and its effects on practice and theory. In <i>Routledge Library Editions: Education Mini-Set N Teachers & Teacher Education Research 13 vols</i> (pp. Vol220-34). Routledge. 3. Kwan, B. M., Brownson, R. C., Glasgow, R. E., Morrato, E. H., & Luke, D. A. (2022). Designing for dissemination and sustainability to promote equitable impacts on health. <i>Annual Review of Public Health</i>, 43(1), 331-353. <p>Websites:</p> <ol style="list-style-type: none"> 1. Research to Action https://www.researchtoaction.org 2. CORDIS - EU Research Results https://cordis.europa.eu 3. Knowledge Translation (KT) Program - SickKids https://www.sickkids.ca/en/care-services/clinical-programs/knowledge-translation/ 4. National Institutes of Health (NIH) Dissemination Resources https://www.nih.gov 5. UK Research and Innovation (UKRI) - Research Impact https://www.ukri.org 6. Science Dissemination - UNESCO https://www.unesco.org 			

Information literacy

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Alica Kolarić, University of Zadar (Croatia) akolaric20@unizd.hr
Sector	University
Thematic area	Information literacy
EQF level	Level 6 (Bachelor)
ISCED-F field	0322 Library, information and archival studies
ESCO skills & competences	<p>T6.3 - transversal skills and competences - life skills and competences - applying civic skills and competences critically evaluate information and its sources (evaluate and analyse information and its sources, have a critical understanding of media in democratic societies)</p> <p>K0322 – knowledge - social sciences, journalism and information - journalism and information - library, information and archival studies - source criticism</p> <p>S2.7 – skills - information skills - analysing and evaluating information and data - analysing and evaluating information and data</p>
Proposed dates of the classes	7/03, 14/03, 21/03, 28/03, 4/04, 11:00 - 13:00 (CET)
One hour for tutoring consultations	4/04, 13:00-14:00 (CET)
Date of the exam/ final assessment	11/04, 11:00-13:00 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	<p>The course introduces students to the basics of information literacy. It is suitable for anyone interested in the topic, regardless of prior knowledge.</p> <p>Information literacy has been a subject of study for the past 50 years, gaining increasing relevance due to the rapid and significant changes in the modern information environment. The issue of accessing, evaluating, and effectively and ethically using information continues to grow in importance. The development of AI technologies poses new challenges that information users should be able to handle. Information literacy is essential for developing effective information users.</p>

Description of the content (week by week)	<p>Unit 1. Information literacy: the concept. Information literacy in contexts: everyday life, citizenship, education, workplace, health. Orientation in the information environment. (2 h)</p> <p>Unit 2. Identifying information needs (2 h)</p> <p>Unit 3. Seeking information. Affective dimension. (2 h)</p> <p>Unit 4. Evaluation of information (2 h)</p> <p>Unit 5. Ethical use of information. Creating and sharing information. (2 h)</p>			
Importance for society	<p>Information literacy enables people to understand the information world around them, form informed opinions, and make informed decisions. Information-literate individuals can challenge assumptions and authorities, recognize bias and misinformation, and engage actively in democratic life. It is crucial for an informed and active citizenry in a democratic society.</p>			
Skills (hard and soft skills)	<p>Hard skills: research skills, critical evaluation</p> <p>Soft skills: critical thinking, ethical awareness</p>			
Sustainable Development Goals	<p>SDG4. Quality education</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Explain the information environment, including different information sources and formats.	<p>Lecture, discussions, individual work, group work.</p>	<p>Quiz, debate, evaluation of assignments, presentations.</p>	<p>Individual work, group work. Work in pairs, essay.</p>	<p>Supervised with no identity verification.</p>
Formulate research problem and inquiry, identify and recognize the information needs.	<p>Lecture, discussions, individual work, group work.</p>	<p>Quiz, debate, evaluation of assignments, presentations.</p>	<p>Individual work, group work. Work in pairs, essay.</p>	<p>Supervised with no identity verification.</p>
Bibliography	<p>Books:</p> <ol style="list-style-type: none"> Horton, F. W. (2008). <i>Understanding information literacy: a primer; an easy-to-read, non-technical overview explaining what information literacy means, designed for busy public policy-makers, business executives, civil society administrators and practicing professionals. Selected chapters.</i> https://unesdoc.unesco.org/ark:/48223/pf0000157020?posInSet=4&queryId=5054a075-b154-415e-9943-41e93fb693c3 			

Publications/articles:

1. CILIP (2018). *CILIP Definition of Information Literacy*.
https://www.cilip.org.uk/resource/resmgr/cilip/information_professional_and_news/press_releases/2018_03_information_lit_definition/cilip_definition_doc_final_f.pdf
2. IFLA (2017). *How to spot fake news*.
<https://blogs.ifla.org/lpa/files/2017/01/How-to-Spot-Fake-News.pdf>
3. Sabzalieva, E., & Valentini, A. (2023). *ChatGPT and artificial intelligence in higher education: quick start guide*. URL:
https://eduq.info/xmlui/bitstream/handle/11515/38828/ChatGPT-Artificial-Intelligence-in-higher-education-Quick-Start-guide_UNESCO-2023.pdf?sequence=2&isAllowed=y

Websites:

1. UNESCO (2023). *Information Literacy*.
<https://www.unesco.org/en/ifap/information-literacy>
2. UNESCO (2023). *Five Law of media and Information Literacy*.
<https://www.unesco.org/en/media-information-literacy/five-laws>
3. UNESCO (2021). *7 minutes to understand AI*.
<https://www.youtube.com/playlist?list=PLWuYED1WVJIPHJLk84wWQbzeZcWlt5rwU>
4. *Study Toolbox: Searching Online Databases*. Southern Institute of Technology (SIT) (Sep 12, 2024).
https://sitacnz.libguides.com/Study_Toolbox/Searching_Databases

Neuroscience and artificial intelligence

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Carmen Moret-Tatay, Catholic University of Valencia (Spain) mariacarmen.moret@ucv.es
Sector	Smart
Thematic area	Cognitive systems and neuroscience
<u>EQF level</u>	Level 6 (Bachelor)
<u>ISCED-F field</u>	0313 Psychology - cognitive sciences
ESCO skills & competences	<p>K068 – knowledge - inter-disciplinary programmes and qualifications involving information and communication technologies (icts)</p> <p>K091 – knowledge - health</p> <p>T2.3 – transversal skills and competences - dealing with problems</p> <p>T2.4 – transversal skills and competences - thinking creatively and innovatively</p> <p>S5.6 – skills - using digital tools for collaboration, content creation and problem solving</p>
Proposed dates of the classes	07/03, 14/03, 21/03, 28/03, 04/04, 13:00-15:00 (CET)
One hour for tutoring consultations	21/03, 15:00-16:00 (CET)
Date of the exam/ final assessment	04/04, 13:00-15:00 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	This course explores the intersection of neuroscience and artificial intelligence (AI), examining how insights from the brain inspire advancements in neuroscience concepts applied to the health field.
Description of the content	<p><u>Unit 1. A Fruitful Reciprocity in Neuroscience-AI Connection (2 hours)</u></p> <p>Main goals:</p> <ol style="list-style-type: none"> 1. To explore the foundational principles of neuroscience and artificial intelligence (AI), aiming to elucidate the underlying mechanisms of information processing in both biological and computational systems. 2. To examine the symbiotic relationship between neuroscience and AI, identifying mutual benefits and potential synergies for advancing understanding, innovation,



and application in fields such as neuroprosthetics, brain-computer interfaces, and cognitive enhancement technologies.

3. To foster interdisciplinary collaboration and critical thinking skills among students, encouraging them to integrate knowledge from neuroscience and AI to address complex challenges and ethical considerations in the development and implementation of neurotechnologies.

Unit 2. Introduction to NLP (2 hours)

Main goals:

1. To introduce fundamental concepts and techniques in Natural Language Processing (NLP), providing students with a comprehensive understanding of how computers can comprehend and generate human language.
2. To explore various applications of NLP across industries such as healthcare, finance, customer service, and social media analysis, emphasizing the transformative impact of NLP on information retrieval, sentiment analysis, machine translation, and dialogue systems.
3. To engage students in hands-on activities and projects to develop practical skills in text preprocessing.

Unit 3. Identification of language components through NLP (2 hours)

Main goals:

1. To approach to the components of natural language through the lens of Natural Language Processing (NLP), focusing on linguistic features such as syntax, semantics, pragmatics, and discourse structure.
2. To have some basic knowledge about interpret linguistic data from diverse sources such as text corpora, social media platforms, and spoken conversations, facilitating insights into python and orange resources

Unit 4. NLP components to detect cognitive impairment (2 hours)

Main goals:

1. Investigate the integration of NLP components such as sentiment analysis, semantic similarity, and discourse coherence analysis with cognitive assessment protocols, enabling the development of automated screening tools for detecting subtle cognitive changes indicative of neurodegenerative diseases like Alzheimer's and dementia.
2. Collaborate with healthcare professionals and researchers to validate NLP-based approaches for detecting cognitive impairment using AI solutions.

Importance for society

Natural Language Processing (NLP) for Health Science is important for society due to its potential to revolutionize various aspects of healthcare and medical research. NLP refers to the technology that enables computers to understand, interpret, and

	<p>generate human language in a way that is valuable. When applied to the field of health science, NLP offers several crucial benefits</p> <p>Overall, NLP's ability to enhance data processing, support medical research, and improve patient outcomes makes it a vital technology in advancing healthcare, ultimately benefiting society by promoting better health and well-being for all.</p>			
Skills (hard and soft skills)	<p>Hard skills: AI for Neuroscience Research & Ethics</p> <p>Soft skills: Teamwork & Problem-solving</p>			
SDGs	<p>SDG3. Good health and well-being</p> <p>SDG5. Gender quality</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Demonstrate the fundamentals of Natural Language Processing	In-class presentation, exercise in groups	Assistance and individual assignments	Acquiring basic knowledge about the variety of underwater cultural heritage, exposition	Supervised online or onsite with identity verification
Apply NLP basics to spontaneous language	Individual study case	Exercise where students must apply a code	Assignment and in class presentation	Supervised online or onsite with identity verification
Bibliography	<p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Asgari, M., Kaye, J., & Dodge, H. (2017). <i>Predicting mild cognitive impairment from spontaneous spoken utterances</i>. <i>Alzheimer's & Dementia: Translational Research & Clinical Interventions</i>, 3(2), 219-228. 2. Bird, S., Klein, E., & Loper, E. (2009). <i>Natural language processing with Python</i>. O'Reilly Media. 3. Boyd, R. L., & Schwartz, H. A. (2021). <i>Natural language analysis and the psychology of verbal behavior: The past, present, and future states of the field</i>. <i>Journal of Language and Social Psychology</i>, 40(1), 21-41. 4. Calzà, L., Gagliardi, G., Favretti, R. R., & Tamburini, F. (2021). <i>Linguistic features and automatic classifiers for identifying mild cognitive impairment and dementia</i>. <i>Computer Speech & Language</i>, 65, 101113. 5. Dehghani, M., & Boyd, R. L. (Eds.). (2022). <i>Handbook of language analysis in psychology</i>. Guilford Publications. <p>Websites:</p> <p>https://www.nltk.org/</p>			

Environmental literature

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Mirna Sindičić, University of Zadar (Croatia) msindici@unizd.hr
Sector	University
Thematic area	Environmental and science education
EQF level	Level 6 (Bachelor)
ISCED-F field	0232 Literature and linguistics
ESCO skills & competences	S1.3.1 – Skills – communication, collaboration and creativity – teaching and training – teaching academic or vocational subjects – teach principles of literature K0232 – Knowledge – arts and humanities – languages - literature and linguistics – literary theory K0314 – Knowledge – social sciences, journalism and information – social and behavioural sciences - sociology and cultural studies
Proposed dates of the classes	10/03, 17/03, 24/03, 31/03, 07/04, 14/04, 14:00-16:00 (CET)
One hour for tutoring consultations	08/04, 12:00-13:00 (CET)
Date of the exam/ final assessment	14/04, 14:00-16:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	Environmental humanities are among the most dynamic subfields in literary and cultural studies today. This course on environmental literature, situated within the framework of environmental humanities, provides guidance in reading and analyzing climate fiction and environmental literature. Through the study of selected fictional texts, students will explore nature/society dualisms and the relationship between humans and the natural environment. Reading literature offers numerous benefits beyond entertainment and personal growth. It enriches vocabulary, develops empathy, enhances communication skills, and fosters analytical and critical thinking. Importantly, it also raises awareness of climate change and underscores the need for a more sustainable way of living. The aim of this course is to examine why literary fiction matters in the context of climate change discussions, investigate how literary and cultural forms shape perceptions of and relationships with the environment, and understand how writers express their environmental concerns within broader debates on climate change. Ultimately, the course seeks to demonstrate how fictional texts can

	raise awareness about climate change and suggest new ways of thinking about this critical issue.			
Description of the content (week by week)	<p>Unit 1. Course introduction. What are the Environmental humanities? What is the Anthropocene? Responding to the Environmental crisis (2 hours)</p> <p>Unit 2. Literature and the Anthropocene. Ecocriticism and Eco-poetics. Does Climate fiction make a difference? (2 hours)</p> <p>Unit 3. Early ecological fiction and Nature Writing. (2 hours)</p> <p>Unit 4. Climate change and 20th and 21st Century Literature. (2 hours)</p> <p>Unit 5. Imagining extinction. Concluding remarks. (2 hours)</p>			
Importance for society	<ul style="list-style-type: none"> • Increases awareness on environmental issues. • Humanizes climate change and provokes empathy. • Provokes ethical reflections and critical thinking about environment, ecology, climate change and sustainability. • Inspires action and change. 			
Skills (hard and soft skills)	<p>Hard skills: Writing skills, Communication skills</p> <p>Soft skills: Analytical & Critical thinking, Active listening</p>			
Sustainable Development Goals	<p>SDG4. Quality education</p> <p>SDG5. Gender equality</p> <p>SDG10. Reduced inequalities</p> <p>SDG11. Sustainable cities and communities</p> <p>SDG12. Responsible consumption and production</p> <p>SDG13. Climate action</p> <p>SDG17. Partnerships for the goals</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Analyse the assigned environmental literature	Lecture and discussion	Presentation prepared by student	Individual work on final essay	Supervised online
Interpret literary and cultural texts within wider debates and discourses on environment and climate change	Case studies	Evaluation of assignment	Attendance and class participation	Supervised online

Bibliography

Books:

1. Jean Giono, *The Man who Planted Trees*
2. Paolo Cognetti, *The Eight Mountains*
3. J. G. Ballard, *The Drowned World*
4. Maja Lunde, *The History of bees*

Publications/articles:

1. Clark, Timothy (2011), *The Cambridge Introduction to Literature and the Environment*, Cambridge University Press.
2. Emmet, R. S., Nye, D. E. (2017), *The Environmental Humanities. A Critical Introduction*, The MIT Press
3. Parham, John (ed.) (2021), *The Cambridge Companion to Literature and the Anthropocene*, Cambridge University Press.

Websites:

1. <https://climateimagination.asu.edu/everything-change/>
2. <https://www.dailymotion.com/video/xw69i5>
3. <https://www.imdb.com/title/tt14641542/>

SDGs - The Blue Print for the Sustainable Development

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Violeta Simionescu, Technical University of Civil Engineering (Romania) violeta.simionescu@utcb.ro
Sector	Sustainability
Thematic area	Sustainable development goals
EQF level	Level 6 (Bachelor)
ISCED-F field	0413 Management and administration
ESCO skills & competences	<p>K0412 – knowledge – business, administration and law – finance, banking and insurance finance, banking and insurance - global standards for sustainability reporting</p> <p>S1.9.0 – skills – communication, collaboration and creativity - solving problems – solving problems</p> <p>S4.1.0 – skills – management skills – developing objectives and strategies - developing objectives and strategies - develop strategy to solve problems</p> <p>T2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts – think critically</p>
Proposed dates of the classes	11/03, 18/03, 25/03, 01/04, 08/04, 12:00-14:00 (CET)
One hour for tutoring consultations	01/04, 14:00-15:00 (CET)
Date of the exam/ final assessment	08/04, 13:00-14:00 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	<p>The Sustainable Development Goals (SDGs), established by the United Nations, provide a comprehensive roadmap for addressing some of the most pressing global challenges, including poverty, inequality, climate change, and environmental degradation. In recent years, the urgency to tackle these issues has grown considerably due to increasing climate-related events, socioeconomic inequalities, and global health crises, highlighting the interconnectedness of global systems. This course explores the SDGs as a transformative framework for sustainable development, emphasizing their role as a guideline for fostering global resilience, equity, and environmental sustainability.</p>

	<p>The relevance of SDGs has expanded beyond policy into business, economics, and civil society, becoming a core focus for industries, governments, and organizations worldwide. Consequently, the SDGs serve as both a blueprint and a benchmark for creating sustainable, resilient business models and operations.</p> <p>The aim of the course is to equip students with knowledge and operational tools in order to develop their professional career in the sustainability arena: comprehensive understanding of SDGs, awareness of global challenges, and understanding of the importance of integrating sustainability into economic activities/business models for the benefit of society.</p>			
Description of the content (week by week)	<p>Unit 1. Introduction to the micro-credential (1 hour), Introduction to the SDGs (1 hour)</p> <p>Unit 2. The relationship between sustainability and economic growth in the present-day economic structure and practices - integrating SDGs into the social systems (2 hours)</p> <p>Unit 3. Engaging with social systems: governance of the sustainable development and SDGs at global, European, national level and organisation level (2 hours)</p> <p>Unit 4. Compliance and reporting on SDGs at global, European, national level and organisation level (2 hour)</p> <p>Unit 5. The evolving role of SDGs in shaping the future of sustainability and closing of the course (1 hour), Teamwork presentations in plenary - examination (1 hour)</p>			
Importance for society	Sustainability literacy is empowering learners to engage with various social systems, actively contributing to required shift in mindset, behaviour and economic activity along more sustainable lines.			
Skills (hard and soft skills)	<p>Hard skills: Sustainability reporting and compliance</p> <p>Soft skills: Systems thinking & Problem solving</p>			
Sustainable Development Goals	<p>SDG4. Quality education</p> <p>SDG8. Decent work and economic growth</p> <p>SDG12. Responsible consumption and production</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Demonstrate a critical understanding of sustainability (goals) at local, European and global level	Lectures and Presentations	Quizzes	Questions testing the learner's ability to list the SDGs, map key elements/targets around SDGs and recall/recognize elements of governance and reporting within various social systems	Supervised online with identity verification.

Illustrate incorporation of specific SDGs at organisation level	Lectures and Presentations + case studies, individual and plenary reflections	Team presentation (3 learners): addressing a specific sustainability challenge and reporting in a social system	Team work Requirements: preparation of presentation, presentation in front of the colleagues	Supervised online with identity verification.
Bibliography	<p>Recommended readings and resources will be provided throughout the course, and includes:</p> <p>Course notes:</p> <p>V. Simionescu - Course notes - SDGs – THE BLUEPRINT FOR THE SUSTAINABLE DEVELOPMENT, 2025</p> <p>Book:</p> <p>Monkelbaan, J. (2019). Governance for the Sustainable Development Goals: Exploring an Integrative Framework of Theories, Tools, and Competencies. Governance for the Sustainable Development Goals, DOI https://doi.org/10.1007/978-981-13-0475-0</p> <p>Websites:</p> <ol style="list-style-type: none"> 1. Sustainable Development Goals https://sdgs.un.org/ (specific references and content selected by the lecturer) 2. European Union - Sustainable Development- https://commission.europa.eu/strategy-and-policy/sustainable-development-goals_en (specific references and content selected by the lecturer) 3. OECD - Sustainable Development Goals (SDGs) - https://www.oecd.org/dac/sustainable-development-goals.htm 4. Our World in Data – Sustainable Development Goals - https://ourworldindata.org/sdgs (specific references and content selected by the lecturer) 5. Global standards for reporting on environmental, social, and economic impacts https://www.globalreporting.org/ (specific references and content selected by the lecturer) 6. Sustainability due diligence https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en 7. Corporate sustainability reporting - https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en 			

Games and Gamification

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Josip Ćirić, University of Zadar (Croatia) jciric@unizd.hr http://djelatnici.unizd.hr/~jciric/index_en.html
Sector	Smart
Thematic area	Games and gamification
EQF level	Level 6 (Bachelor)
ISCED-F field	018 Inter-disciplinary programmes and qualifications involving education
ESCO skills & competences	K0288 – knowledge - arts and humanities - inter-disciplinary programmes and qualifications involving arts and humanities K0211 – knowledge - arts and humanities - audio-visual techniques and media production – digital game genres S1.11.0 - skills - communication, collaboration and creativity – designing systems and products – designing systems and products - apply gaming psychology S2.1 – skills - information skills - conducting studies, investigations and examinations
Proposed dates of the classes	14/03, 21/03, 28/03, 04/04, 11/04, 06/06, 10:00-12:00 (CET)
One hour for tutoring consultations	11/04, 12:30-13:30 (CET)
Date of the exam/ final assessment	06/06, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	<p>Gaming industry is not only growing steadily, but it has also become one of the largest entertaining industries in the world, considering both production investment, and number of players. A considerable social influence deriving from the gamer culture is evident.</p> <p>Transforming educational activities into game-like experience has proven to be a positively perceived experience. In this course students will have the opportunity to learn some of the most frequent game mechanics in video games and how using the same principles they may transform courses. Basic principles of gamification are to be presented, understood and applied in exercises. A pilot project will be part of the course, and it will serve as a grading base also.</p>

Description of the content (week by week)	<p>Unit 1. Introduction (1 hour)</p> <p>Unit 2. Anthropology and psychology of gaming (3 hours)</p> <ul style="list-style-type: none"> • Caillois and Huizinga • Applying psychological theories to gaming experience • Psychological principles of game design <p>Unit 3. Game mechanics (2 hours)</p> <ul style="list-style-type: none"> • Key elements of game mechanics: rules, objectives, and systems • Case studies of effective game designs <p>Unit 4. Game-based learning experience (1 hour)</p> <ul style="list-style-type: none"> • Educational games: an overview • Designing gamified learning environment <p>Unit 5. Gamification principles (2 hours)</p> <ul style="list-style-type: none"> • Gamification strategies in business and education: an overview • Point systems, badges, and leaderboards <p>Unit 6. Implementing games in the classroom (1 hour)</p> <ul style="list-style-type: none"> • How to integrate games into the course curricula • Overcoming implementational challenges 			
Importance for society	<p>Understanding both more productive and more motivational approach to education is important insight if we're to provide relevant and up-to-date educational experience. Relying on win-win approach in the game theory, students, institutions, and in the long run, society profits from motivated, informed and enthusiastic participants in the educational process.</p>			
Skills (hard and soft skills)	<p>Hard skills: Computer software use</p> <p>Soft skills: Problem solving, Creativity and innovation</p>			
Sustainable Development Goals	<p>SDG4. Quality education</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Identify and describe main gamification strategies	<p>Lectures, individual activities, discussions</p>	<p>Written exam</p>	<p>Acquiring basic knowledge about gamification, reading materials available on Moodle platform</p>	<p>Supervised online or onsite with identity verification</p>
List and describe the basic principles, methods and	<p>Lectures, individual activities, discussions</p>	<p>Assignment evaluation</p>	<p>Students will perform gamification process on a lecture from a course of their own choosing; a short</p>	<p>Supervised online or onsite with identity verification</p>

<p>techniques used in a gamifying process</p>			<p>written report is to be provided</p>	
<p>Bibliography</p>	<p>Books:</p> <ol style="list-style-type: none"> 1. Kapp, Karl M. (2014) <i>The Gamification of Learning and Instruction: Game-Based Methods and Strategies for Training and Education</i>. Pfeiffer, (selected chapters) 2. Farber, Matthew (2017) <i>Game-Based Learning in Action: How an Expert Affinity Group Teaches With Games</i>. Peter Lang Inc., International Academic Publishers (selected chapters) 3. Grilliopoulos, Daniel; Webber, Jordan Erica (2017) <i>Ten Things Video Games Can Teach Us: (about life, philosophy and everything)</i>. Little, Brown Book Group. 4. Ma, Minhua et. Al. (2011) <i>Serious games and edutainment applications</i>. Springer-Verlag London. (selected chapters) <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Erenli, Kai (2012) <i>The Impact of Gamification A Recommendation of Scenarios for Education</i>. IEEE. DOI: 10.1109/ICL.2012.6402106 2. De Sousa Borges, S. et. al. (2014) <i>A Systematic Mapping on Gamification Applied to Education</i>. Proceedings of the 29th Annual ACM Symposium on Applied Computing DOI: 10.1145/2554850.2554956 3. Nah, F. F. H. et al. (2013) <i>Gamification of Education Using Computer Games</i>. Lecture Notes in Computer Science. DOI: 10.1007/978-3-642-39226-9_12 			

Underwater cultural heritage as a tourist resource

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Irena Radic Rossi, University of Zadar (Croatia) irradic@unizd.hr
Sector	Coastal
Thematic area	Coastal tourism
EQF level	Level 6 (Bachelor)
ISCED-F field	0222 History and archaeology
ESCO skills & competences	T2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts K0288 – knowledge – arts and humanities – inter-disciplinary programmes and qualifications involving arts and humanities S4.3.3 – skills – management skills – allocating and controlling resources – allocating and controlling physical resources
Proposed dates of the classes	14/03, 21/03, 28/03, 04/04, 11/04, 18/04, 10:00-12:00 (CET)
One hour for tutoring consultations	04/04, 12:00-13:00 (CET)
Date of the exam/ final assessment	18/04, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	The course introduces the students to the variety of the underwater cultural heritage, its importance and touristic potential. It raises awareness of the importance of cultural resources in the coastal and marine areas, and teaches how to participate in their protection, presentation and preservation. New policies should arise based on the new knowledge.
Description of the content (week by week)	Unit 1. Introduction on underwater cultural heritage in coastal and marine areas (2 hours) Unit 2. Types of underwater cultural heritage sites and their state of preservation (1 hour) Unit 3. Examples and treatment of well-preserved sites around Europe (1 hour) Unit 4. Case-study 1 (1 hour)

	Unit 5. Case-study 2 (1 hour) Unit 6. Case-study 3 (1 hour) Unit 7. Group work (1 hour) Unit 8. New ideas and proposals (1 hour) Unit 9. Conclusion (1 hour)			
Importance for society	The society should become aware of the importance of cultural resources in the coastal and marine areas, and learn how to participate in its protection, presentation and preservation. New policies should arise based on the new knowledge.			
Skills (hard and soft skills)	Hard skills: Project Management & Interpreting data Soft skills: Communication & Critical thinking			
Sustainable Development Goals	SDG4. Quality education SDG14. Life below water			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Classify underwater cultural heritage, and its potential for tourist presentation	Lectures	Discussion on the acquired knowledge	Acquiring basic knowledge about the variety of underwater cultural heritage	supervised online or onsite with identity verification
Identify underwater cultural heritage sites for potential tourist presentation	Group work	The evaluation of the performed analysis of the available data	The students will search for the potential examples of sites to be presented to the general public	supervised online or onsite with identity verification
Bibliography	<p>Books:</p> <ol style="list-style-type: none"> 1. A. Bowens (ed.), 2009. <i>Underwater Archaeology; The NAS Guide to Principles and Practice</i>. Portsmouth, Nautical Archaeology Society and Blackwell Publishing. 2. <i>The UNESCO Convention on the Protection of the Underwater Cultural Heritage</i>. Paris, UNESCO – Secretariat of the 2001 Convention on the Protection of the Underwater Cultural Heritage. <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. M. Stefanile, 2016. Underwater Cultural Heritage, Tourism and Diving Centers: The case of Pozzuoli and Baiae (Italy). In <i>IKUWA V Proceedings of the 5th International Congress on Underwater Archaeology, A heritage for mankind, Cartagena, October 15th-18th, 2014</i>. Madrid, Ministerio de educación, cultura y deporte: 213-224. 2. A. Manglis, A. Fourkiotou, D. Papadopoulou, 2022. A Roadmap for the Sustainable Valorization of Accessible Underwater Cultural Heritage Sites. In F. Bruno et al., <i>Dive in Blue Growth – Protection and Promotion</i> 			

of Accessible Underwater Cultural Heritage Sites, [Heritage, Special Issue]. <https://www.mdpi.com/2571-9408/4/4/259>.

Websites:

1. <https://www.baiasommersa.it/>
2. <https://sporadesdiving.gr/diving-sites/peristera-shipwreck/>
3. <https://sanctuaries.noaa.gov/>

Green competences 4 all

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Chrysanthi Kadji, Frederick University (Cyprus) pre.kch@frederick.ac.cy
Sector	Sustainability
Thematic area	Green skills
EQF level	Level 6 (Bachelor)
ISCED-F field	0099 Generic programmes and qualifications not elsewhere classified
ESCO skills & competences	T2 – transversal skills and competences - thinking skills and competences T6 – transversal skills and competences - life skills and competences T6.2 – transversal skills and competences – life skills and competences - applying environmental skills and competences T6.3 – transversal skills and competences – life skills and competences - applying civic skills and competences
Proposed dates of the classes	17/03, 24/03, 31/03, 07/04, 14/04, 28/04, 05/05, 09:00-11:00 (CET)
One hour for tutoring consultations	29/04, 09:00-10:00 (CET)
Date of the exam/ final assessment	05/05, 09:00-10:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 11 h Asynchronous hours & self-directed learning: 14 h
General description	This micro-credential course is designed to develop sustainability competences focusing on SDG13 (Climate Action). It integrates the European GreenComp model to cultivate critical thinking, empathy, leadership, and decision-making, skills essential for addressing climate challenges in personal and professional contexts. Through practical activities like simulations and group projects, participants gain hands-on experience in reducing carbon footprints, promoting sustainable resource use, and aligning with ESG standards. This course enhances employability while fostering a sustainable mindset, empowering students to contribute to a greener and more responsible future.
Description of the content (week by week)	Unit 1. Introduction to climate science and the current state of climate (2 hours) Unit 2. Impacts of Climate Change on Natural and Human Systems (2 hours)

	Unit 3. Climate Policy and International Agreements (2 hours) Unit 4. Mitigation, Adaptation, and the Path Forward (2 hours) Unit 5. Professionalisation for Climate Action (2 hours)			
Importance for society	The specific micro-credential on sustainability competences, addresses top priority topics: Climate crisis and most importantly building foundational, cross-disciplinary understanding of sustainability issues and competences among university students, regardless of their field or career path. Some of the key reasons why Green Competences 4 all may have a positive societal impact include: <ol style="list-style-type: none"> 1. Promotes Societal Awareness and Responsibility 2. Develops Sustainability-Skilled professionals 3. Supports Achievement of Global Sustainability Goals 4. Encourages Systemic Thinking and Cross-Disciplinary Collaboration 5. Empowers Future Leaders and Change Agents 			
Skills (hard and soft skills)	Hard skills: <ul style="list-style-type: none"> - Environmental monitoring and data analysis - crucial as it provides a foundation for understanding and addressing environmental issues, - Knowledge of sustainability frameworks (like GreenComp and SDGs) - offers a structured approach to implementing sustainable practices. Soft skills: <ul style="list-style-type: none"> - Analytical thinking - enables students to critically evaluate climate related data, interpret environmental impacts, and make informed decisions, essential for tackling complex ecological issues), - Leadership skills - allows students to advocate for sustainable practices, influence others, and drive positive change within communities and organizations. 			
Sustainable Development Goals	SDG13. Climate action			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Discuss the sustainability of different practices in real-world scenarios, applying the knowledge on the climate change	Presentation, personal study, group discussion,	Self-assessment quiz	-	Unsupervised with no identity verification

mechanism and impacts.	role play on given scenario, case-study			
Propose sustainable solutions in collaborative settings applying critical thinking and problem-solving.	Group work Case-study project	Group project and presentation	<p>Short scale survey project:</p> <p>Work in groups of four to conduct a small-scale survey amongst their peers about climate crisis and their ideas and attitudes towards the issue, using a short questionnaire.</p> <p>The outcomes of their survey will be presented to the plenary on the final meeting of the micro-credential course.</p> <p>The evaluation of the work will follow an evaluation rubric.</p> <p>Students will be given:</p> <ul style="list-style-type: none"> - the questionnaire - the evaluation rubric so as to be informed about the evaluation criteria - The template of their presentation 	Supervised online or onsite with identity verification
Bibliography	<p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Australian Academy of Sciences (2015) The Science of Climate Change. Questions and Answers. https://www.climatechangeauthority.gov.au/sites/default/files/2020-06/submissions/2015/Australian%20Academy%20of%20Science%20-%20attachment.pdf 2. GreenComp. The European Sustainability Competence Framework. https://publications.jrc.ec.europa.eu/repository/handle/JRC128040 3. Leopoldina Nationale Akademie der Wissenschaften (2021). Climate change: causes, consequences and possible actions. https://www.leopoldina.org/fileadmin/redaktion/Publikationen/Infomaterialia/Factsheet Klimawandel 1.1 EN_web.pdf 4. Climate change and the GHGs https://unstats.un.org/unsd/environment/envpdf/unsd_EAC_Workshop/Session%208b_Anand%20Climate%20change%20and%20GHGs.pdf <p>Websites:</p> <ol style="list-style-type: none"> 1. Causes of Climate Change https://climate.ec.europa.eu/climate-change/causes-climate-change_en 2. SDG13 Climate Action https://sdgs.un.org/goals/goal13 			

Entrepreneurship in Blue Economy

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Wieland Müller, University of Rostock, Germany wieland.mueller@uni-rostock.de
Sector	European
Thematic area	Blue Economy
EQF level	Level 6 (Bachelor)
ISCED-F field	0413 Entrepreneurship
ESCO skills & competences	<p>K0413 – knowledge – business, administration and law – business and administration - management and administration</p> <p>S2.7.4 – skills – information skills – analysing and evaluating information and data - analysing business operations</p> <p>S4.1.1 – skills – management skills – developing objectives and strategies - identifying opportunities</p> <p>T2.4 – transversal skills and competences – thinking skills and competences - thinking creatively and innovatively</p>
Proposed dates of the classes	17/03, 24/03, 31/03, 07/04, 14/04, 13:00-15:00 (CET)
One hour for tutoring consultations	The individual consultations hours will be adapted to students' timetables
Date of the exam/ final assessment	Deadline for submitting the exam (EU-CONEXUS Moodle): 21/04, 23:59 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	<p>This micro-credential addresses the field of Blue Economy entrepreneurship and provides participants with the knowledge and skills to develop sustainable business models. The Blue Economy has rapidly gained momentum as a key driver of economic growth and environmental sustainability, attracting the attention of investors, policy makers and entrepreneurs alike. This growing interest is fuelled by the increasing recognition of the oceans' enormous potential for innovation and economic development, as well as the growing awareness of the urgent need to protect marine ecosystems. Students studying this subject will be well prepared to take advantage of the emerging opportunities in this dynamic sector, drive innovation and contribute to a more sustainable future for our oceans.</p>

Description of the content (week by week)	Unit 1. Introduction to the Blue Economy and Sustainable Entrepreneurship (2 hours) Unit 2: From an idea to a sustainable company (2 hours) Unit 3: Research and Market Analysis (2 hours) Unit 4: Sustainable Business Model Canvas (1/2) (2 hours) Unit 5: Sustainable Business Model Canvas (2/2) (2 hours)			
Importance for society	This micro-certificate enables students to develop sustainable business models in the fast-growing blue economy sector. Participants will gain the knowledge and skills to tackle pressing environmental challenges while taking advantage of the economic opportunities our oceans offer.			
Skills (hard and soft skills)	Hard skills: Business Model Canvas, Market and SWOT Analysis Soft skills: Teamwork, Communication			
Sustainable Development Goals	SDG8. Decent work and economic growth SDG9. Industry, innovation and infrastructure SDG13. Climate action SDG14. Life below water			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Recognise problems and opportunities related to the blue economy, develop creative solutions and conduct a market analysis to understand target groups and the competitive landscape.	Lectures, Discussion, Group Work, Individual Work, Presentations	Attendance, Evaluation of assignments	Group work, Individual work	Unsupervised with no identity verification
Develop creative solutions to identified problems and create a sustainable business model using the Sustainable Business Model Canvas.				

Bibliography

Books:

1. Borriello, Antonio, et al. "The EU blue economy report 2024." (2024).
2. Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. John Wiley & Sons.
3. Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2014). *Value Proposition Design: How to Create Products and Services Customers Want*. John Wiley & Sons.
4. Pauli, G. (2010). *The Blue Economy: 10 years, 100 innovations, 100 million jobs*. Paradigm Publications.
5. Froese, R., & Pauly, D. (Hrsg.). (2019). *Blue growth: Innovation for a sustainable ocean economy*. Cham: Springer.

Spatial planning for resilient coastal areas

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Byron Ioannou, Frederick University (Cyprus) b.ioannou@frederick.ac.cy
Sector	Coastal
Thematic area	Coastal risks and protection
EQF level	Level 6 (Bachelor)
ISCED-F field	0731 Architecture and town planning
ESCO skills & competences	K0731 - knowledge - architecture and town planning - urban planning - spatial planning S4.1 - skills – management skills - developing objectives and strategies S2.7 – skills – information skills - analysing and evaluating information and data T2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts
Proposed dates of the classes	17/03, 31/03, 07/04, 05/05, 08/05, 17:00-19:00 (CET)
One hour for tutoring consultations	07/04, 17:00-18:00 (CET)
Date of the exam/ final assessment	08/05 17:00-19:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	Spatial planning has a long tradition, especially in Europe as an institutional process of manifesting and coordinating development and resources of cities and regions. The current status of overdevelopment in coastal zones, along with the emerging climate crises has turned formal planning into a decisive parameter for economic and social robustness, as well as environmental conservation. Any expert interested in working at the public or governance sector needs to be aware of the barriers and enablers spatial planning may impose to the sustainable coastal areas perspective.
Description of the content (week by week)	Unit 1. What is Spatial Planning? (2 hours) Unit 2. Planning and development challenges and risks for coastal areas (2 hours) Unit 3. Typology and content of plans for coastal areas (2 hours) Unit 4. Comprehension a coastal plan resilience/ workshop (2 hours) Unit 5. Final assessment (2 hours)

Importance for society	Societies and local governments are usually emphasizing in short term actions and remedies for every aspect of their reality. Spatial planning as a long-term scope is often neglected or undecimated. Most of the barriers that sustainable coastal development phases have to do with the absence of proactiveness and long-term planning.			
Skills (hard and soft skills)	Hard skills: Plan Assessment, Sustainability Comprehension Soft skills: Critical Thinking and Creativity, Analytical Skills			
Sustainable Development Goals	SDG3. Good health and well-being SDG8. Decent work and economic growth SDG10. Reduced inequalities SDG11. Sustainable cities and communities SDG13. Climate action SDG14. Life below water SDG15. Life on land			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Recognise the typology and the impact of institutional spatial planning for coastal areas	Personal study Case Study Group discussion	Assignment on a case study	Individual work	Unsupervised with no identity verification
Explain how a specific spatial plan for addresses the issues of resilient coastal area in an integrated/ wholistic approach	Personal study Case Study Group discussion	Oral support of the report in the class	Presentation in front of the colleagues	Unsupervised with no identity verification
Bibliography	Books: <ol style="list-style-type: none"> Hall, P. (1994) Urban & Regional Planning, 5th, edn. London: Routledge. Publications/articles: <ol style="list-style-type: none"> Sørdahl, P.B., Kvalvik, I. When all you have is a hammer - integration challenges in coastal zone planning. Maritime Studies 23, 39 (2024). Bonatz, H., Reimann, L. & Vafeidis, A.T. Comparing built-up area datasets to assess urban exposure to coastal hazards in Europe. Sci Data 11, 499 (2024). Santamouris, M., Vasilakopoulou, K. (2024). Urban Climate and Heat Mitigation in Coastal Cities. In: Rassia, S.T. (eds) The Blue Book. Springer, Cham. 			

Websites:

1. Coastal Zone Management Plans <https://iwrmaactionhub.org/learn/iwrm-tools/coastal-zone-management-plans>
2. European Commission – Marine Environments https://environment.ec.europa.eu/topics/marine-environment_en
3. European Environmental Agency – Marines and Coasts <https://www.eea.europa.eu/en/topics/in-depth/seas-and-coasts>
4. Department of Environment/ Cyprus – Integrated Coastal Zone Management https://www.moa.gov.cy/moa/environment/environmentnew.nsf/page11_en/page11_en?OpenDocument
5. ESPON - Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe <https://archive.espon.eu/planning-systems>

Theoretical skills for PV systems installers

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Nicholas Christofides, Frederick University (Cyprus) n.christofidees@frederick.ac.cy
Sector	Urban
Thematic area	Near Zero Energy Building (NZEB)
EQF level	Level 6 (Bachelor)
ISCED-F field	0713 Electricity and energy
ESCO skills & competences	K0713 - knowledge – engineering, manufacturing and construction – engineering and engineering trades - electricity and energy – solar energy S2.4 - skills – information skills - processing Information S2.7 - skills – information skills - analysing and evaluating information and data T.2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts
Proposed dates of the classes	19/03, 26/03, 02/04, 09/04, 23/04, 07/05, 10:00-12:00 (CET)
One hour for tutoring consultations	30/04, 10:00-11:00 (CET)
Date of the exam/ final assessment	07/05, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	The learning unit addresses the most fundamental and critical elements governing the design and installation of residential photovoltaic systems. National schemes for the promotion and encouragement of the use of renewable energy sources adopted in various countries as part of the EU-CONEXUS program will be compared and contrasted. The students will have the opportunity to develop skills associated with theoretical, technical, legislative and practical aspects of grid connected photovoltaic systems.
Description of the content (week by week)	Unit 1: Introduction to PV systems, PV phenomenon, components of PV systems, differentiation between grid-connected and off-grid systems, fundamental parameters, symbols and units. (2 hours)

	<p>Unit 2: Concept and analysis of net metering and net billing schemes, demonstration of on-line real time system monitoring, analysis of real electricity bills. (2 hours)</p> <p>Unit 3: PV technologies and basic electrical parameters, PV module efficiency determination, differentiation between power and energy output, factors affecting PV output power and correlation with real systems. (2 hours)</p> <p>Unit 4: Example of net metering system sizing, fundamental considerations and cost-benefit analysis. (2 hours)</p> <p>Unit 5: comparison and contrast of PV systems performance in different countries, in-class assignment. (2 hours)</p>			
Importance for society	<p>The Energy transition and greenhouse gas emission (decarbonisation) is top priority of the European commission. Society's involvement towards this transition is of paramount requirement and citizens should be aware of the general requirements towards this energy transition. PV systems are the main renewable energy source that the EU relies on for the energy transition. Knowledge of basic ways to monitor the operation of such systems is therefore critical for maintaining these systems in health operation and preventing long term outages.</p>			
Skills (hard and soft skills)	<p>Hard skills: Photovoltaic systems design, installation and maintenance of PV systems, energy efficiency analysis</p> <p>Soft skills: Problem solving, adaptability to regulatory frameworks, technical communication, team collaboration</p>			
Sustainable Development Goals	<p>SDG4. Quality Education</p> <p>SDG7. Affordable and Clean Energy</p> <p>SDG8. Decent work and economic growth</p> <p>SDG9. Industry, Innovation and Infrastructure</p> <p>SDG11. Sustainable cities and communities</p> <p>SDG13. Climate action</p> <p>SDG15. Life on land</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Determine PV system performance depending on geographical location	<p>Personal study</p> <p>Group discussion</p> <p>Case Study</p>	<p>Presentation, oral support of work.</p>	<p>Presentation in front of the colleagues</p>	<p>supervised online or onsite with identity verification.</p>

Perform cost-benefit analysis of residential grid-connected PV systems	Personal study Case Study Group discussion	Assignment on a case study	Individual assignment	unsupervised with no identity verification
Bibliography	Websites: <ol style="list-style-type: none"> 1. https://joint-research-centre.ec.europa.eu/photovoltaic-geographical-information-system-pvgis_en 2. https://www.pveducation.org/ 3. http://www.pvtrin.eu/home/index.html 			

Innovations for sustainable urban development
[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Paris A Fokaides, Frederick University (Cyprus) eng.fp@frederick.ac.cy
Sector	Urban
Thematic area	Urban environmental challenges
EQF level	Level 6 (Bachelor)
ISCED-F field	0732 Building and civil engineering
ESCO skills & competences	S1.4 – skills – communication, collaboration and creativity - presenting information S1.9 – skills – communication, collaboration and creativity - solving problems S4.9 – skills – management skills - making decisions T2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts T2.3 – transversal skills and competences - thinking skills and competences - dealing with problems
Proposed dates of the classes	19/03, 26/03, 02/04, 09/04, 23/04, 07/05, 15:00-17:00 (CET)
One hour for tutoring consultations	30/04, 16:00-17:00 (CET)
Date of the exam/ final assessment	07/05, 15:00-17:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	The course focuses on sustainable urban development, addressing global trends in urbanization, resource management, and smart city technologies. Over recent years, the integration of renewable energy systems, circular economy principles, and data-driven decision-making has advanced rapidly, making smart cities a pivotal solution for climate change and urban challenges. This is a trending topic due to growing urban populations and the urgent need for environmentally responsible infrastructure. Gaining knowledge in this field equips students with the skills to shape resilient, efficient, and sustainable urban environments, meeting both current and future societal demands.
Description of the content (week by week)	Unit 1: Introduction to Smart Cities and Sustainability (2 hours) <ul style="list-style-type: none"> • Overview of smart cities and global megatrends in urbanization and technology.

	<ul style="list-style-type: none"> • Introduction to relevant SDGs, including SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities). <p>Unit 2: Sustainable Urban Planning and Infrastructure (2 hours)</p> <ul style="list-style-type: none"> • Principles of sustainable urban planning. • Integration of renewable energy systems in urban environments. <p>Unit 3: Data-Driven Solutions for Urban Systems (2 hours)</p> <ul style="list-style-type: none"> • Role of data analytics and IoT in managing smart cities. • Case studies on circular economy practices in urban settings. <p>Unit 4: Innovative Smart City Solutions (2 hours)</p> <ul style="list-style-type: none"> • Emerging trends in sustainable building technologies and transportation. • Collaborative group work: Smart city innovation proposal. <p>Unit 5: Final Assessment and Presentations – overview (2 hours)</p> <ul style="list-style-type: none"> • Group presentations of smart city proposals. • Reflection and Q&A on future challenges and opportunities. <p>Unit 6. Exam (2 hours)</p>
Importance for society	<p>The topic of "Smart Cities: Innovations for Sustainable Urban Development" holds critical importance for society, as it:</p> <ol style="list-style-type: none"> addresses rapid urbanization by highlighting the importance of sustainable urban growth to manage population increases and resource demands, focuses on reducing carbon emissions and building urban resilience against climate-related risks, emphasizes the role of urban development in achieving SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities), promotes renewable energy by advocating for integrating renewable energy systems into urban planning and infrastructure, uses IoT, data analytics, and smart technologies to improve urban efficiency and sustainability, educates on the environmental impact of traditional urban practices and introduce sustainable alternatives, raises awareness about governance and policies needed for sustainable urban initiatives, develops critical thinking on long-term urban challenges, inspiring proactive and innovative responses.
Skills (hard and soft skills)	<p>Hard skills:</p> <ul style="list-style-type: none"> • Renewable energy system integration, • Data analysis for smart cities, • Circular economy principles. <p>Soft skills:</p> <ul style="list-style-type: none"> • Interdisciplinary collaboration, • Adaptability and ethical awareness.

Sustainable Development Goals	SDG7. Affordable and clean energy SDG9. Industry, innovation and infrastructure SDG11. Sustainable cities and communities			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
<p> Utilize data analytics and IoT technologies to analyse urban systems and support informed decision-making for smart cities. </p> <p> Collaborate effectively in interdisciplinary teams to propose and implement strategies for sustainable urban development. </p>	<p> Lectures: Providing foundational knowledge and concepts. </p> <p> Workshops: Hands-on sessions to explore real-world applications. </p> <p> Case Study Analysis: Practical insights through analysis of successful smart cities. </p> <p> Individual/Group Assignments: Collaborative and individual projects focusing on course topics. </p> <p> Blended Learning: A mix of online and in-person resources for flexibility and engagement </p>	<p> Projects: Students will design and propose innovative solutions for smart city challenges, demonstrating their ability to apply course concepts. </p> <p> Oral presentations of projects or case study analyses to assess communication and analytical skills. </p> <p> Short quizzes. </p> <p> Written exam. </p> <p> Group discussions and debates. </p>	<p> Individual Assignments: Weekly or bi-weekly assignments on topics like sustainable planning and smart infrastructure. </p> <p> Group Projects: Collaborative projects focusing on case studies or hypothetical urban planning scenarios. </p> <p> Case Study Analysis: Detailed analysis and presentation on real-world smart city examples. </p> <p> Final Project or Exam: A comprehensive assignment or exam that evaluates the student's overall understanding and ability to apply the concepts learned. </p>	Supervised online or onsite with identity verification.
Bibliography	<p> Publications: </p> <ol style="list-style-type: none"> 1. The European Green Deal 2. The Urban Agenda for the EU 3. Directives on energy efficiency (such as the Energy Efficiency Directive) 4. The Renewable Energy Directive 5. The Smart Cities and Communities European Innovation Partnership (EIP SCC) 6. The EU Strategy for Sustainable and Smart Mobility <p> Websites: </p> <ol style="list-style-type: none"> 1. EUR-Lex 			

Visual culture

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Costas Mantzalos, Frederick University (Cyprus) c.mantzalos@frederick.ac.cy
Sector	European
Thematic area	European identity and its transformation
EQF level	Level 6 (Bachelor)
ISCED-F field	0213 Fine arts
ESCO skills & competences	S1.0 – skills - communication, collaboration and creativity - communication, collaboration and creativity S1. 12 – skills - communication, collaboration and creativity - creating artistic, visual or instructive materials S1.9 – skills - communication, collaboration and creativity - solving problems T6.4 – transversal skills and competences – life skills and competences - applying cultural skills and competences
Proposed dates of the classes	19/03, 26/03, 02/04, 09/04, 16/04, 07/05, 15:00-17:00 (CET)
One hour for tutoring consultations	30/04, 16:00-17:00 (CET)
Date of the exam/ final assessment	07/05, 15:00-17:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 11 h Asynchronous hours & self-directed learning: 14 h
General description	<p>European identity and its transformation: Europe as a cultural community of shared values (cultural identity); Europe as a political community of shared democratic practices (political identity). EU values are such as human dignity, freedom of movement, democracy, equality, rule of law, human rights.</p> <p>Intercultural communication/multilingualism: By enhancing communication skills. and understanding other people's perspectives, this will prove to be a driver for good communication, allowing empathy and caring through diverse opinions and behaviours.</p> <p>Information literacy: This will provide opportunities and a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information"</p>

	Modernization and heritage protection: The reinvention and the updating of our heritage in the 21 st century which will provide a new dimension and will deal with actions or processes that are aimed at safeguarding the character-defining elements of a cultural resource to retain its heritage value and extend its physical life.			
Description of the content (week by week)	Unit 1: Defining Global Visual Culture, Visual Presentations (2 hours) Unit 2: Globalization and Hybridism (2 hours) Unit 3: Consumers / Producers in a Global Network (2 hours) Unit 4: Rethinking the Nation, again: The Nation as Brand (2 hours) Unit 5: The Local and the Global (2 hours)			
Importance for society	Visual culture highlights shared values like democracy, human dignity, and cultural heritage, promoting unity and understanding in diverse European societies. It enhances intercultural communication by transcending language barriers, visual media fosters empathy, inclusivity, and appreciation for diverse perspectives. Additionally, it empowers critical media literacy by encouraging individuals to critically evaluate visual information, combating misinformation and understanding context and intent as well as it drives social and political awareness as it serves as a tool for advocacy and reflection, inspiring dialogue on human rights, equality, and societal challenges.			
Skills (hard and soft skills)	Hard skills: Visual media analysis, Heritage preservation techniques Soft skills: Intercultural Communication, Critical thinking and decision making			
Sustainable Development Goals	SDG1. No poverty SDG2. Zero hunger SDG3. Good health and well-being SDG4. Quality education SDG5. Gender quality SDG8. Decent work and economic growth SDG10. Reduced inequalities SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate action SDG16. Peace, justice and strong institutions SDG17. Partnerships for the goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Critically examine visual media to identify	Combination of lectures, seminars,	Self-assessment quizzes, oral	In-class participation discussions, short answer quizzes,	

cultural bias or misinformation	tutorials, group presentations, workshops, and written assessments.	presentations, case studies analysis, group discussions/ debates.	presentations, final exam with presentation	Supervised online or onsite with identity verification.
Compare visual representations of cultural heritage across different European regions to explore commonalities and differences				
Bibliography	<p>Books:</p> <ol style="list-style-type: none"> 1. Shamita Sharmacharja, A manual for the 21st century Art Institution, Koenign Books, 2009 2. Nicolas Bourriaud, Relational Aesthetics, Les Presse Du Reel, Franc 1998 3. Jean-François Lyotard, The postmodern condition, University of Minesota 1984 4. Bhaba Homi, The Location of Culture, Routledge, 1994 5. John Berger, Ways of Seeing, Penguin 1977 <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Costas Mantzalos, Documenta fifteen: The 15th edition of Documenta, curated by the 'ruangrupa' collective, Kassel, Germany, 18 June–25 September 2022. International Journal of Education Through Art, Volume 19, Issue Art, Sustainability and Partnerships, Mar 2023, p. 135 – 140 2. Eliane Glaser, Bring back ideology: Fukuyama's 'end of history' 25 years on, The Guardian, Fri 21 Mar 2014 <p>Websites:</p> <ol style="list-style-type: none"> 1. https://www.vam.ac.uk/articles/art-nouveau-an-international-style 2. https://www.moma.org/interactives/exhibitions/2009/futurism/ 3. https://www.metmuseum.org/toah/hd/bauh/hd_bauh.htm 4. https://www.metmuseum.org/toah/hd/dsgn3/hd_dsgn3.htm 			

Towards a green european industrial policy

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Juan Sapena, Catholic University of Valencia (Spain) juan.sapena@ucv.es
Sector	European
Thematic area	European environmental policies
EQF level	Level 6 (Bachelor)
ISCED-F field	0311 Economics
ESCO skills & competences	T2.1 transversal skills and competences - thinking skills and competences - processing information, ideas and concepts - think critically S1.0 skills - communication, collaboration and creativity - advising and consulting K 03.11 Knowledge - social sciences, journalism and information - social and behavioural sciences - economics - development economics K 03.11 knowledge - social sciences, journalism and information - social and behavioural sciences – economics - environmental economics
Proposed dates of the classes	26/03, 02/04, 09/04, 16/04, 30/04, 15:00-17:00 (CET)
One hour for tutoring consultations	16/04, 17:00-18:00 (CET)
Date of the exam/ final assessment	30/04, 15:00-17:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	The course is aimed to study the challenges of European industrial policy to enhance competitiveness of European industries in the context balancing the necessary competitiveness of European industries in a globalized economy, aligned with the development of a green economy.
Description of the content (week by week)	Unit 1. Economic development and the role of industrial policy (2 hours) Unit 2. The stages of European integration and the roots of an European industrial policy (2 hours) Unit 3. Industrial policies across the world: The strategic game of competitiveness (2 hours)

	Unit 4. The Green Challenge of Industrial Policy: Promoting Competitiveness and Structural Transformation (2 hours)			
	Unit 5. The challenge of Europe's Open Strategic Autonomy (2 hours)			
Importance for society	Awareness of globalization trends and European position.			
Skills (hard and soft skills)	Hard skills: Researching Soft skills: Critical thinking & Decision-making			
Sustainable Development Goals	SDG1. No poverty SDG8. Decent work and economic growth SDG9. Industry, innovation and infrastructure SDG11. Sustainable cities and communities			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Understand economic growth and global competition, and the importance of global value chains	Real case studies, lectures, groups discussions and reflective examples	Quiz, case study, debates, discussion board and research assignment	To be evaluated: Participation or not (at least one complete opinion) Originality of the ideas Connecting comments to the previous content of the course Presentations Format: Title page, Introduction, Brand Background, Sustainability Practices, Analysis, Recommendations, Conclusion, References.	supervised online or onsite with identity verification.
Evaluate Industrial Policy tools and their potential impact on the desired outcomes, as unintended consequences	Colleagues' assignment	Research assignment	Quality of content (relevant and current or not) Depth of analysis (briefly touching the topic – extended analysis) Citation and referencing (Existing or not) Originality (unique own perspective and thoughts or just sharing what it's found)	supervised online or onsite with identity verification.

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1. Aiginger, K., & Rodrik, D. (2020). *Rebirth of industrial policy and an agenda for the twenty-first century*. *Journal of industry, competition and trade*, 20, 189-207. url: <https://link.springer.com/article/10.1007/s10842-019-00322-3>
2. Baldwin, R., & Ito, T. (2021). *The smile curve: Evolving sources of value added in manufacturing*. *Canadian Journal of Economics/Revue canadienne d'économique*, 54(4), 1842-1880.
3. Lauridsen, L. S. (2021). *Industrial policy in the twenty-first century: Competing perspectives*. In H. Zafarullah, & A. S. Huque (Eds.), *Handbook of Development Policy* (1 ed., pp. 238-248). Edward Elgar Publishing.
4. Rodrik, D. (2022). *An industrial policy for good jobs*. Hamilton Project, Brookings Institution.
5. Tagliapietra, S., & Veugelers, R. (2023). *Chapter 1: Industrial policy in Europe: past and future*. In: Tagliapietra, S., & Veugelers, R. (Eds.), *Sparking Europe's New Industrial Revolution*, Bruegel Blueprint Series, p.12-28.
6. Terzi, A., Singh, A., & Sherwood, M. (2022). *Industrial policy for the 21st century: lessons from the past*. *European Economy Discussion Papers*, N. 157 (January), Publications Office of the European Union. The document can be downloaded at https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications_en

Build with nature - techniques for sandy coasts
[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Loreta Kelpšaitė-Rimkienė, Klaipeda University (Lithuania) loreta.kelpsaite-rimkiene@ku.lt
Sector	Coastal
Thematic area	Anatomy of coastal areas
EQF level	Level 6 (Bachelor)
ISCED-F field	0521 Environmental sciences
ESCO skills & competences	<p>K052 – knowledge – natural sciences, mathematics and statistics – environment - environmental sciences - coastal management</p> <p>S1.11.0 – skills - communication, collaboration and creativity - designing systems and products – designing systems and products</p> <p>T2.1 – transversal skills and competences – thinking skills and competences - processing information, ideas and concepts</p> <p>T2.3 – transversal skills and competences – thinking skills and competences - dealing with problems - identify and solve problems</p>
Proposed dates of the classes	02/04, 09/04, 16/04, 23/04, 30/04, 13:00-15:00 (CET)
One hour for tutoring consultations	29/04, 13:00-15:00 (CET)
Date of the exam/ final assessment	30/04, 13:00-15:00 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	<p>Coastal erosion is a natural process that can cause significant damage to coastal communities, including flooding, property loss, and infrastructure damage. According to Eurostat, in 2020, approximately 119 million people or 23% of the EU population, lived in Coastal areas and directly are affected by coastal erosion. One approach to mitigating the effects of coastal erosion is to use "Build with Nature" techniques, which involve working with natural processes to enhance coastal resilience.</p> <p>In this course, you will get knowledge about:</p>

	<ul style="list-style-type: none"> • Natural processes that shape sandy coasts: This involves learning the dynamics of waves, tides, and currents, as well as the role of sediment transport in shaping beaches and dunes. • Coastal hazards and vulnerabilities: This involves learning how to identify coastal areas at risk from erosion, flooding, and other threats and assess the potential impacts on human communities and natural ecosystems. • Designing and implementing "Build with Nature" solutions: This involves learning about different techniques for enhancing coastal resilience, such as beach nourishment, dune restoration, wetland creation, and oyster reef construction.
Description of the content (week by week)	<p>Unit 1. Introduction, Fundamentals of Coastal Processes (1 hour)</p> <p>Unit 2. Waves, Tides, Currents, and Sediment Transport in Coastal Zones (1 hour)</p> <p>Unit 3. Coastal Hazards: Identifying Vulnerable Areas (1 hour)</p> <p>Unit 4. Introduction to "Build with Nature" Techniques (1 hour)</p> <p>Unit 5. Title (number of hours) Beach Nourishment: Techniques, Benefits, and Limitations (1 hour)</p> <p>Unit 6. Dune Restoration and Wetland creation the Role of Vegetation in Coastal Defence (1 hour)</p> <p>Unit 7. Principles of Sustainable Coastal Development (1 hour)</p> <p>Unit 8. Stakeholder Engagement in Coastal Management (1 hour)</p> <p>Unit 9. Monitoring and Adaptive Management for Coastal Projects (1 hour)</p> <p>Unit 10. Exam (1 hour)</p>
Importance for society	<p>A course on "Build with Nature" techniques for sandy coast erosion mitigation is crucial for individuals and employers and holds significant importance for society. Here are several reasons why such a course is valuable for society. It enhances coastal resilience, protects communities, conserves ecosystems, promotes sustainable development, fosters stakeholder inclusivity, supports climate adaptation, preserves cultural heritage, ensures economic stability, and encourages global cooperation.</p>
Skills (hard and soft skills)	<p>Hard skills: Researching, Information processing, Interpreting</p> <p>Soft skills: Critical thinking, Problem-solving, Time management</p>
Sustainable Development Goals	<p>SDG6. Clean water and sanitation</p> <p>SDG9. Industry, innovation and infrastructure</p> <p>SDG11. Sustainable cities and communities</p> <p>SDG12. Responsible consumption and production</p> <p>SDG13. Climate actions</p> <p>SDG14. Life below water</p> <p>SDG15. Life on land</p>

Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Describe main coastal processes and recognise coastal risks to support sustainable resilience strategies.	Lectures	Written Exam (quiz)	Final exam, individual test	Supervised online or onsite with identity verification.
Collect and analyse data, develop effective problem-solving techniques with integration ethical and sustainable approaches to the coastal management practices.	Project-Based Learning (case study analysis), Discussions and Debates during the case study analysis presentation.	Based on the participation in discussions and Presentation of the group and/or individual work	Learners will collaborate in groups to complete projects or presentations. Deliverables may vary, including written reports, presentations, or multimedia.	Unsupervised with no identity verification
Bibliography	<p>Books:</p> <ol style="list-style-type: none"> 1. <i>Coastal Dynamics Open Textbook</i> Authored by Judith Bosboom and Marcel Stive, source: https://www.tudelft.nl/citg/over-faculteit/afdelingen/hydraulic-engineering/sections/coastal-engineering/coastal-dynamics-open-textbook 2. Dean RG, Dalrymple RA. <i>Coastal Processes with Engineering Applications</i>. Cambridge University Press; 2001. <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Vikolainen, V., Bressers, H. & Lulofs, K. A Shift Toward Building with Nature in the Dredging and Port Development Industries: Managerial Implications for Projects in or Near Natura 2000 Areas. <i>Environmental Management</i> 54, 3–13 (2014). https://link.springer.com/article/10.1007/s00267-014-0285-z 2. Korbee, D., Mol, A. P. J., & Van Tatenhove, J. P. M. (2014). Building with Nature in Marine Infrastructure: Toward an Innovative Project Arrangement in the Melbourne Channel Deepening Project. <i>Coastal Management</i>, 42(1), 1–16. https://www.tandfonline.com/doi/abs/10.1080/08920753.2013.863722 3. van Zetten, R., van der Meulen, F. and IJff, S. (2023), Building with Nature at the coast. <i>Nordic Journal of Botany</i>, 2023: e03663. https://nsojournals.onlinelibrary.wiley.com/doi/10.1111/njb.03663 4. Salet, W. (2014). Building with Nature. <i>disP - The Planning Review</i>, 50(1), 4–5. https://www.tandfonline.com/doi/abs/10.1080/02513625.2014.925714 5. van der Meulen, F., IJff, S. and van Zetten, R. (2023), Nature-based solutions for coastal adaptation management, concepts and scope, an 			

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<https://onlinelibrary.wiley.com/doi/10.1111/gcb.14063>

Websites:

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2. <https://boskalis.com/about-us/company-profile/building-with-nature>
3. <https://www.iadc-dredging.com/subject/environment/building-with-nature/>

Rail at the European scale in regard with the society transitions

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Juan Creus, La Rochelle Université (France) juan.creus@univ-lr.fr
Sector	Urban
Thematic area	Green mobility and transport
EQF level	Level 6 (Bachelor)
ISCED-F field	053 Physical sciences
ESCO skills & competences	K07 – knowledge - engineering; manufacturing and construction K104 – knowledge - transport services S2.5 – skills – information skills - measuring physical properties S2.8 – skills – information skills - monitoring, inspecting and testing
Proposed dates of the classes	03/04, 10/04, 17/04, 24/04, 15/05, 12:00-14:00 (CET)
One hour for tutoring consultations	24/04, 14:00-15:00 (CET)
Date of the exam/ final assessment	15/05, 12:00-14:00 (CET) – time limited written assessment 22/05, 23:59 (CET) – Individual Project submission.
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	<p>This course covers the evolution of the European rail system including rolling stock, infrastructure, stations, and their sub-systems in regard with the energetic and environmental transitions.</p> <p>The decarbonisation of diesel trains, noise and vibration reduction, energy saving, circular economy, resource consumption, resilience to climate change, attractiveness of passenger trains are underlined during this talk.</p> <p>It will be discussed the European sustainable transport policies, such as the Smart and Sustainable Mobility Strategy. It will provide the needed scientific and technical solutions increasing the environmental performance of the railway system.</p>
Description of the content (week by week)	<p>Unit 1. The rail system in France (2 h)</p> <p>Unit 2. Decarbonisation: strategy (2 h)</p> <p>Unit 3. Energy saving and environmental transitions (2 h)</p> <p>Unit 4. Future in rail systems (2 h)</p>

Importance for society	Rail transport attractiveness permits to limit the CO ₂ emissions. Smart and sustainable mobility is important through environmental transition (cycle life analyses) but also to improve the rail transport network in Europe.			
Skills (hard and soft skills)	<p>Hard skills: Knowledge and abilities in environmental and energetic transitions applied for rail transport</p> <p>Soft skills:</p> <p>Critical and creative thinking: Through exploring sustainability challenges, students will develop the ability to solve problems</p> <p>Design of future rail transport: Through exploring cycle of life and eco-design, students will develop the ability to promote the rail transport</p>			
Sustainable Development Goals	SDG3. Good health and well-being SDG7. Affordable and clean energy SDG9. Industry, innovation and infrastructure SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate actions			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Describe the energetic and environmental transition – decarbonisation	Lecture, discussions, individual work	Written assessment	Individual work	Supervised online with identity verification
Point out the Innovation technologies for the future nonpolluting and decarbonized rail transport	Lecture, group discussions, individual research, individual project work	Individual project	Individual project in the form of a 5-6 slides presentation devoted to: smart and sustainable mobility and/or decarbonized energy	Unsupervised online with identity verification
Bibliography	<p>Publications/articles:</p> <ol style="list-style-type: none"> 1. L. Dincer & al. Journal of natural gas science and engineering. 28 (2016) 461-478. 2. N. Ahsan & al. Renewable and sustainable energy reviews. 186 (2023) 113621. 3. M. Cipek & al. Energy 232 (2021) 121097. 4. O. Olugbenga & al. Environmental research letters. 14 (2019) 123002. 			

Funding opportunities for young researchers: From idea to funding

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Thomas Bartzanas, Agricultural University of Athens (Greece) t.bartzanas@aua.gr
Sector	European
Thematic area	European funding instruments
EQF level	Level 6 (Bachelor)
ISCED-F field	0031 Personal skills
ESCO skills & competences	S1.13 – skills – communication, collaboration and creativity - writing and composing S1.8 – skills – communication, collaboration and creativity - working with others K0811 – knowledge – agriculture, forestry, fisheries and veterinary – agriculture - crop and livestock production T2.2 – transversal skills and competences – thinking skills and competences - planning and organising
Proposed dates of the classes	03/04, 10/04, 17/04, 24/4, 08/05, 14:00-16:00 (CET)
One hour for tutoring consultations	06/05, 14:00-15:00 (CET)
Date of the exam/ final assessment	08/05, 14:00-16:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	Securing funding is essential for advancing high-quality research and innovation. However, many researchers face challenges in pursuing a research career due to limited funding opportunities and inadequate support. This course aims to empower young researchers by guiding them through each step of the funding process, from shaping their initial ideas to crafting and submitting a compelling proposal. It covers key areas such as identifying funding sources, writing effective proposals, developing realistic budgets, and maximizing funding potential. Participants will acquire practical skills to align their projects with funders' priorities, communicate their ideas clearly, and navigate common challenges in the application process.
Description of the content (week by week)	Unit 1: Funding opportunities: Main aspects to be considered (2h) <ul style="list-style-type: none"> - Overview of the research funding landscape - Identifying Suitable Funding Opportunities

	<ul style="list-style-type: none"> - Is your idea suitable for a specific call? <p>Unit 2: Research idea and strategy (2h)</p> <ul style="list-style-type: none"> - How to turn an idea into a research question and outline - Setting realistic goals, creating a work plan, and establishing a project timeline - Finding core partners-creating the proposal core team <p>Unit 3: How to write a winning proposal (2h)</p> <ul style="list-style-type: none"> - Initial concept note - Consortium building - Structuring the proposal (excellence part, how to draft work packages) - Techniques for emphasizing your research's innovation, expected outcomes, an real-world impacts <p>Unit 4: Budget and other considerations (2h)</p> <ul style="list-style-type: none"> - Preparing a Realistic Budget and Financial aspects - Communicate the budget to the consortium partners - Open data, gender issues, risks & contingency Plans, Ethics - Dissemination plan and exploitation of the results <p>Unit 5: Submitting your proposal (1h)</p> <ul style="list-style-type: none"> - Dealing with the submission platform - Organising your proposal in the submission platform - Information to be collected from the consortium partners <p>Unit 6: Exams (1h)</p>			
Importance for society	The course is targeting to undergraduate students aiming to enter the research field with an interest in research funding and grantsmanship, after completing their studies. The course will assist them in enhancing their ability to secure external funding from European calls.			
Skills (hard and soft skills)	Hard skills: Research proposal writing, Project management Soft skills: Communication, Networking, Critical thinking			
Sustainable Development Goals	SDG4. Quality education SDG5. Gender quality SDG9. Industry, innovation and infrastructure SDG10. Reduced inequalities SDG17. Partnerships for the goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Align research ideas with funding priorities	Presentations, lectures, case studies	Project presentations	Group work (work in pairs, presentation in front of the colleagues)	Supervised with no identity verification

<p>Communicate research effectively</p>		<p>presented by students</p>		
<p>Bibliography</p>	<p>Books:</p> <ul style="list-style-type: none"> - <i>Robert Trew, 2017. Get Funded: An Insider's Guide to Building An Academic Research Program</i>, ISBN:9781107068322, 1107068320, Cambridge Academic Press - <i>Ritsert, Jansen, 2013. Funding Your Career in Science: From Research Idea to Personal Grant</i>, ISBN:9781107435414, 1107435412, Cambridge Academic Press - <i>Gerard Crawley, 2015. Grant Writer's Handbook, The: How To Write A Research Proposal And Succeed</i>, ISBN:9781783267613, 1783267615, Imperial College Press <p>Publications/articles:</p> <ul style="list-style-type: none"> - Horizon Implementation Day: Finding opportunities & submitting a proposal in Horizon Europe (link) - How to write a Horizon Europe Proposal (link) - Proposal writing strategy: writing research grants to funding agencies (link) <p>Websites:</p> <ol style="list-style-type: none"> 1. https://erc.europa.eu/homepage 2. https://marie-sklodowska-curie-actions.ec.europa.eu/funding 3. https://research-and-innovation.ec.europa.eu/funding_en 			

Traditional timber houses carpentry in seismic and coastal areas

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Andreea Căsuță (Duțu), Technical University of Civil Engineering (Romania) andreea.dutu@utcb.ro
Sector	Sustainability
Thematic area	Technologies for sustainable development
EQF level	Level 6 (Bachelor)
ISCED-F field	0732 Building and civil engineering
ESCO skills & competences	S7.0 – skills – constructing - constructing K073 – knowledge – engineering, manufacturing and construction - architecture and construction T4.3 – transversal skills and competences – social and communication skills and competences - collaborating in teams and networks
Proposed dates of the classes	07/04, 14/04, 21/04, 28/04, 05/05, 09:00-11:00 (CET)
One hour for tutoring consultations	30/04, 09:00-10:00 (CET)
Date of the exam/ final assessment	05/05, 09:00-11:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	<p>The traditional houses represent a part of the cultural identity of each country, adapted to the local climate and material availability. The course aims to present the main materials that were used for traditional houses, structural layout and construction technology secrets and wisdom transferred to us from long time ago by our ancestors who learned in time what details are better and how to adapt to local environment.</p> <p>Recent tendencies, especially after the pandemics, are to move to the countryside and live healthier. And many properties include old traditional buildings, which owners wish to adapt to current needs.</p> <p>How to sustainability build/maintain traditional houses in coastal areas will be explained, as a smart way to provide tourism industry a housing solution which keeps the local identity, while adapted to the current market.</p>

Description of the content (week by week)	<p>Unit 1. Traditional house types around the world and their features (2 hours)</p> <p>Unit 2. Behaviour of traditional houses in earthquakes: real life and experimental proofs (2 hours)</p> <p>Unit 3. Environmental issues for traditional houses in coastal areas (1 hours)</p> <p>Unit 4. Building and maintenance construction techniques for different types of traditional houses (2 hours)</p> <p>Unit 5. The science of timber carpentry: how to carpentry and why (1 hours)</p> <p>Unit 6. Let's make teams, choose a traditional house near you and talk about it! (1 hour)</p> <p>Unit 7. Exam – present your chosen traditional house and tell me what you see/learned when looking at it (1 hour)</p>			
Importance for society	<p>Regain the wisdom of master carpenters, adapt and use it in the current worldwide context. There are many situations when we learn from local past wisdom, and we can grow by transposing it into the future.</p>			
Skills (hard and soft skills)	<p>Hard skills: Recognize structural characteristics of traditional timber houses, Identify what interventions an existing traditional house needs</p> <p>Soft skills: Organisation & Collaboration, Prioritization</p>			
Sustainable Development Goals	<p>SDG3. Good health and well-being</p> <p>SDG11. Sustainable cities and communities</p> <p>SDG12. Responsible consumption and production</p> <p>SDG15. Life on land</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Understand the taxonomy of existing traditional houses	<p>Case studies</p>	<p>Presentations prepared by students</p>	<p>Group work</p>	<p>Supervised online</p>
Identify the different construction details in terms of impact in the seismic/coastal climate resistance	<p>Group work</p>	<p>Scientific paper analysis, dialogue or conversations</p>	<p>Work in pairs, presentation in front of the colleagues</p>	<p>Supervised online</p>
Bibliography	<p>Books:</p> <ol style="list-style-type: none"> 1. Dutu, A., & Yamazaki, Y. (2024) <i>Seismic Resistance of Vernacular Timber Frames with Infills: Case Studies from Japan and Romania (1st ed.)</i>. CRC Press. https://doi.org/10.1201/9781003405375 			

2. Brown, A. (2013) *The genius of Japanese Carpentry. Secrets of an Ancient Woodworking craft (Revised)*. Tuttle Publishing.
3. Dutu, Andreea, (2021) *Book Chapter 14th: An engineering view on the traditional timber frames with infills in Romania, Masonry Construction in Active Seismic Regions*, 1st Edition, Elsevier, Editors: Rajesh Rupakhety Dipendra Gautam, Paperback ISBN: 9780128210871, Imprint: Woodhead Publishing

Publications/articles:

1. Dutu, Andreea, Mihai Niste, Iolanda-Gabriela Craifaleanu, and Marina Gingirof. (2023). *Construction Techniques and Detailing for Romanian Paiantă Houses: An Engineering Perspective*, Sustainability 15, no. 2: 1344. <https://doi.org/10.3390/su15021344>
2. Dutu A., Niste M., Spatarelu I., Dima D.I., Kishiki S., (2018) *Seismic evaluation of Romanian traditional buildings with timber frame and mud masonry infills by in-plane static cyclic tests*, *Engineering Structures*, Volume 167, pages 655-670
3. Dutu, A., Sakata, H., Yamazaki, Y., and Shindo, T. (2015) *In-Plane Behavior of Timber Frames with Masonry Infills under Static Cyclic Loading*, *J. Struct. Eng.*, 10.1061/(ASCE)ST.1943-541X.0001405 , 04015140.
4. Qu Z., Dutu A., Zhong J., and Sun J. (2015) *Seismic Damage to Masonry-Infilled Timber Houses in the 2013 M7.0 Lushan, China, Earthquake*. *Earthquake Spectra*: August 2015, Vol. 31, No. 3, pp. 1859-1874.

Websites:

1. <https://tfmro.utcb.ro/>

Social Entrepreneurship and Commitment in SmUCS

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Johann-Christian Pöder, johann-christian.poder@uni-rostock.de Ulrike Schröder, ulrike.schroeder2@uni-rostock.de Stefan Dienstbeck, stefan.dienstbeck@uni-rostock.de University of Rostock (Germany)
Sector	Sustainability
Thematic area	Social Entrepreneurship and Commitment
EQF level	Level 6 (Bachelor)
ISCED-F field	0223 Philosophy and ethics
ESCO skills & competences	K.0223 – knowledge – arts and humanities – philosophy and ethics T.6.2 – transversal skills and competencies – applying environmental skills and competences T.6.4 – transversal skills and competencies – applying cultural skills and competencies T.4.3 – transversal skills and competencies – collaborating in teams and networks – demonstrate intercultural competence
Proposed dates of the classes	11/04, 25/04, 02/05, 09/05, 16/05, 30/05, 10:00-12:00 (CET)
One hour for tutoring consultations	23/05, 10:00-11:00 (CET)
Date of the exam/ final assessment	30/05, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 12 h Asynchronous hours & self-directed learning: 13 h
General description	This course examines the rapidly evolving field of social entrepreneurship and the ethics of sustainability and explores how to create social impact by integrating ethical principles and sustainable practices into entrepreneurial strategies. With a focus on sustainability, this course equips students with the tools to promote environmental stewardship and social justice, from religious as well from secular perspectives. With an emphasis on developing interfaith and intercultural skills, this course prepares students to engage respectfully and effectively with diverse communities. Through case studies and critical discussion, students will explore innovative social entrepreneurship and ethical strategies that promote a culture of sustainability, inclusivity and global awareness.

Description of the content (week by week)	Unit 1. What is social entrepreneurship? Ethical and social commitments (2 hours) Unit 2. Ethics of sustainability in social entrepreneurship (2 hours) Unit 3. The humanistic foundations of sustainability (2 hours) Unit 4. World religions and sustainability (2 hours) Unit 5. Sustainable action and leadership: Case Studies (2 hours)			
Importance for society	The social importance of this micro-credential for society lies in exploring the vital link between social entrepreneurship and the ethics and practice of sustainability, highlighting the essential role of social and religious entrepreneurship in addressing global challenges, and equipping students with skills to create meaningful social impact.			
Skills (hard and soft skills)	Hard skills: Communication skills, Research skills Soft skills: Analytical & critical thinking, Ethical and religious awareness			
Sustainable Development Goals	SDG4. Quality education SDG9. Industry, innovation and infrastructure SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate action SDG16. Peace, justice and strong institutions SDG17. Partnerships for the goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Explain & critically evaluate ethical theories and religious frameworks of social entrepreneurship and sustainability thinking in global perspective	presentations lectures group work individual work homework (tasks)	attendance and class participation quizz	student presentation	supervised online or onsite with identity verification
Collaborate or lead in ethically responsible and religiously aware decision making in culturally diverse settings	presentations lectures group work individual work homework (tasks)	attendance and class participation quizz	written assignment	supervised online or onsite with identity verification

Bibliography

Books:

1. Nicholls, A. (2006). *Social Entrepreneurs – New Models of Sustainable Social Change*, Oxford University Press.
2. Langergaard, L. L., Dupret, K., & Eschweiler, J. (Eds.) (2023). *Learning about Social Entrepreneurship and Management in Times of Social Transformation*. Springer.
3. Bornstein, D. (2007). *How to Change the World*, Oxford University Press.
4. Defourny, J. & M. Nyssens (2021). *Social Enterprise in Western Europe – Theory, Models and Practice*. Routledge.
5. Becker, C. U. (2023). *Sustainability Ethics and Sustainability Research*, Springer.
6. Singh, N., et al. (Eds.) (2023). *Faith Traditions and Sustainability: New Views and Practices for Environmental Protection*. Springer International.
7. John, Mulford, et al. (Eds.) (2024). *Faith-Based Entrepreneurship: An Empirical Analysis of Christian Faith-Based Firms*. Springer.
8. Pittinsky, T. L. (2009). *Crossing the Divide: Intergroup Leadership in a World of Difference*. Harvard Business Press.
9. Collste, G. (Ed.) (2016). *Ethics and Communication: Global Perspectives*. London: Rowman & Littlefield.
10. Schweiker, W. (Ed.) (2008). *The Blackwell Companion to Religious Ethics*. Blackwell

Articles:

1. De Paula, G. O., and Cavalcanti, R. N. (2000), "Ethics: Essence for Sustainability", *Journal of Cleaner Production* 8.2: 109-117.
2. Rendtorff, J. D. (2020). Sustainability, Basic Ethical Principles, and Innovation. *Handbook of Business Legitimacy: Responsibility, Ethics and Society*. Ed. by R. J. Dahl. Cham: Springer. pp. 1631-1658.
3. Robinson, J. (2004). "Squaring the Circle? Some Thoughts on the Idea of Sustainable Development" *Ecological Economics* 48: 369-384.
4. Chunoo, V. S., and K. Callahan (2017). "Pedagogy in Action: Teaching Culturally Relevant Leadership." *Journal of Leadership Studies* 11.3: 42-47.
5. Redekop, Benjamin (2010). "Challenges and Strategies of Leading for Sustainability." *Leadership for Environmental Sustainability*. Ed. by B. W. Redekop and S. Olson. London: Routledge. pp. 55-66.

Websites:

1. <https://sdgs.un.org/>
2. <https://trellis.net>
3. <https://plos.org/>
4. <https://religiousfreedomandbusiness.org/about-our-work>

Research and Innovation Thinking

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Wieland Müller, University of Rostock, Germany wieland.mueller@uni-rostock.de
Sector	University
Thematic area	Research and Innovation Thinking
EQF level	Level 6 (Bachelor)
ISCED-F field	0413 Entrepreneurship
ESCO skills & competences	S1.0 – skills - communication, collaboration and creativity – communication, collaboration and creativity S2.1 – skills - conducting studies, investigations and examinations T2.4 – transversal skills and competences – thinking skills and competences - thinking creatively and innovatively T4.1 – transversal skills and competences – social and communication skills and competences - communicating
Proposed dates of the classes	16/04, 23/04, 30/04, 07/05, 14/05, 13:00-15:00 (CET)
One hour for tutoring consultations	The individual consultations hours will be adapted to students' timetables
Date of the exam/ final assessment	Deadline for submitting the exam (EU-CONEXUS Moodle): 21/05, 23:59 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	This micro-credential provides participants with essential skills in the areas of research and innovation, enabling them to manage the complexity of generating new knowledge and translating it into effective solutions. In recent years, rapid technological advances and changing societal needs have increased the demand for innovative approaches in various sectors, including the blue economy. These micro-credentials provide a foundation for understanding research methods, fostering creativity and driving innovation processes, empowering students to become agents of change in a rapidly evolving world.
Description of the content (week by week)	Unit 1. Research and innovation methods (2 hours) Unit 2: Understanding innovation: Fundamentals and principles (2 hours) Unit 3: Critical Thinking and Problem-Solving (2 hours)

	Unit 4: Creativity and Idea Generation (2 hours) Unit 5: Communication of Innovation (2 hours)			
Importance for society	This topic raises awareness and attention to critical issues related to sustainability, innovation and problem solving. By highlighting the interconnectedness of research, innovation and the blue economy, it encourages individuals to think critically about the challenges facing our oceans and to develop creative solutions for a more sustainable future.			
Skills (hard and soft skills)	Hard skills: Research methodologies, Innovation techniques Soft skills: Critical thinking, Communication			
Sustainable Development Goals	SDG8. Decent work and economic growth SDG9. Industry, innovation and infrastructure SDG13. Climate action SDG14. Life below water			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Identify different types of innovations (product, process and business model innovations), assess their relevance for the blue economy sector and communicate these findings in a structured and target group-orientated way.	Lectures, Discussion, Group Work, Individual Work, Presentations	Attendance, Evaluation of assignments	Group work, Individual work	unsupervised with no identity verification
Use creative methods such as brainstorming and SCAMPER to develop solutions to complex challenges and present them in a structured and convincing way.				

Bibliography

Books:

1. Flick, U. (2017). *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. London: Sage Publications.
2. Elder, L., & Paul, R. (2008). *The miniature guide to critical thinking: Concepts and tools*. Dillon Beach, CA: Foundation for Critical Thinking.
3. Brown, T. (2009). *Change by design: How design thinking transforms organizations and inspires innovation*. New York: Harper Business.
4. Pauli, G. (2010). *The Blue Economy: 10 years, 100 innovations, 100 million jobs*. Paradigm Publications.
5. Froese, R., & Pauly, D. (Hrsg.). (2019). *Blue growth: Innovation for a sustainable ocean economy*. Cham: Springer.

AI and Academic Writing Skills: Never the Twain Shall Meet?

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Anna Martinović, University of Zadar (Croatia) amartino@unizd.hr
Sector	University
Thematic area	Professional communication and academic writing
EQF level	Level 6 (Bachelor)
ISCED-F field	0231 – Language acquisition
ESCO skills & competences	S1.13.3 – skills – communication, collaboration and creativity – writing and composing - technical or academic writing T4.1 – transversal skills and competences - social and communication skills and competences – communicating L1 – language skills and knowledge - languages - English - academic English L1 – language skills and knowledge - languages - English - write English
Proposed dates of the classes	25/04, 08/05, 15/05, 22/05, 29/05, 10:00-12:00 (CET)
One hour for tutoring consultations	22/05, 12:00-13:00 (CET)
Date of the exam/ final assessment	29/05, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	The course will equip students with writing skills necessary to function at the university level as well as beyond the academic domain. It will encourage critical thinking with regard to using AI. Furthermore, it will help students organise ideas and present them in a coherent manner.
Description of the content (week by week)	Unit 1. Introduction to academic writing and research skills (1 hour) Unit 2. Using evidence to support your ideas (1 hour) Unit 3. Summarising information from texts (1 hour)

	Unit 4. Sourcing information for your paper (1 hour) Unit 5. Developing your paper – Avoiding plagiarism (1 hour) Unit 6. Writing introductions, conclusions (1 hour) Unit 7. Writing the main body of your paper (1 hour) Unit 8. Incorporating data and referencing (1 hour) Unit 9. Preparing for presentations (1 hour) Unit 10. Student Presentations (Final seminar paper) (1 hour)			
Importance for society	Enabling individuals to develop clear and effective communication in both spoken and written form is a key asset for any organization. Moreover, it will develop learners' English language skills, which is especially important for organizations since English is the world's international language. High levels of literacy are important in order to function in today's complex society.			
Skills (hard and soft skills)	Hard skills: Writing skills, research skills Soft skills: Analytical thinking skills, learning strategies			
Sustainable Development Goals	SDG4. Quality education			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Produce seminar papers and show ability to summarize, paraphrase, and interpret various texts, as well as create a summary of the findings.	Class discussions, group work, individual work	Peer reviewing Seminar paper	Students will be required to discuss their ideas with colleagues. They will be required to write a final seminar paper at the end of the course.	Supervised online
Design a presentation and illustrate the main ideas of the seminar paper.	Individual work, group work	Presentation	Students will be required to present their paper to colleagues.	Supervised online
Bibliography	Books: <u>Required reading:</u> McCormack, J., Slaght, J. (2012). <i>English for Academic Study: Extended Writing and Research Skills</i> . Reading: Garnet Publishing Ltd.			

Additional reading:

1. Bailey, S. (2015). *Academic Writing. A Handbook for International Students* (4th edition). Abingdon, Oxon: Routledge.
2. De Chazal, E., Rogers, L. (2013). *Oxford EAP – A Course in English for Academic Purposes* (Intermediate). Oxford: Oxford University Press.
3. Kruse, O., Rapp, C., Anson, C., Benetos, K., Cotos, E., Devitt, A., Shibani, A. (2023). *Digital Writing Technologies in Higher Education*. Springer International Publishing.
4. McCarthy, Michael, O'Dell, Felicity. (2016). *Academic Vocabulary in Use*. Cambridge: Cambridge University Press.
5. Paterson, Ken, Wedge, Roberta. (2013). *Oxford Grammar for EAP*. Oxford: Oxford University Press.

Ludic Chinese language learning method with tactile HYPA keyboard

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Pierre- Henry de Bruyn, La Rochelle Université (France) phbruyn@univ-lr.fr
Sector	University
Thematic area	Professional communication and academic writing
EQF level	Level 6 (Bachelor)
ISCED-F field	0231 Language acquisition
ESCO skills & competences	L1 – language skills and knowledge – languages – Chinese – interact verbally in Chinese L1 – language skills and knowledge – languages – Chinese – understand written Chinese S1.0.0. – communication, collaboration and creativity – communication, collaboration and creativity - use communication techniques
Proposed dates of the classes	29/04, 6/05, 13/05, 20/05, 27/05, 09:00-11:00 (CET)
One hour for tutoring consultations	20/05, 11:30-12:30
Date of the exam/ final assessment	27/05, 09:00-11:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	<p>Experiment the possibility of a same writing for all languages by learning Chinese language in an innovative way with HYPA (Hyper Pinyin Alphabet) tools invented at La Rochelle University.</p> <p>After an introduction to those innovative tools, this micro-credential will concentrate to a first guidance step in practical phonetic exercises in Mandarin Chinese. Those exercises which will be proposed to be done in parallel with encoding specific gestures on those HYPA tools. In conclusion, the translation of those gestures in the languages of the different members attending those micro-credits courses, will help the participants to perceive more concretely the power of the basic paradigm of the Chinese writing system which is a same writing for different languages. The Chinese intuition that a common writing system for many different languages is so much unknown by Westerners that they do not even imagine what could be a Europe sharing a same writing system, as Chinese do. The training would help students to get just a first concrete glimpse of this intuition.</p>

Description of the content (week by week)	Unit 1. Basic Principles to learn to write as Chinese do (2 hours) Unit 2. Phonetic initials in Mandarin Chinese (2 hours) Unit 3. Notion of homophones in Chinese language (2 hours) Unit 4. Phonetic finals (2 hours) Unit 5. Tools to go further (2 hours)			
Importance for society	By discovering how Chinese society is based on the principle of a common writing system for many different oral languages, students will be aware of the specificity of the Chinese civilisation's specificity and, by contrast, will get new ideas to contribute to build European unity.			
Skills (hard and soft skills)	Hard skills: Oral comprehension, Mastering digital tools Soft skills: Creative thinking, Communication			
Sustainable Development Goals	SDG4: Quality education SDG10: Reduced inequalities SDG11: Sustainable Cities and Communities			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Show a basic knowledge of Chinese language	A part of the knowledge acquired by this micro-unit credit will prepare students to international Chinese language exams (HSK).	Ability to write in pinyin some basic Chinese characters with the HYPA tools in specific sentences.	To assess student performance, some of those sentences will be proposed online in a final oral exam of ten minutes by student. He/she will be required to be able: 1) to translate immediately the sentence heard; 2) to recognize in the sentence the character emphasized among others; 3) explain eventually some grammatical element relative to this sentence.	Supervised online or onsite with identity verification
Demonstrate a first level of oral proficiency	Chinese phonetic initiation	Ability to pronounce some basic Chinese phonemes Practical registration of repetition of Chinese sentences shared online	Ability to pronounce some basic Chinese phonemes Practical registration of repetition of Chinese sentences shared online	Supervised online or onsite with identity verification

Bibliography**Publications:**

1. Wang, Q., & Andrews, J. F. (2021). *Chinese Pinyin*. *American Annals of the Deaf*, 166(4), 446-461.
2. Chen, L., & De Bruyn, P. H. (2023). *HYP A, un outil d'innovation en linguistique appliquée. Didactique gestuelle du lexique en Langues-Cultures*. *Recherches en didactique des langues et des cultures. Les cahiers de l'Acedle*, (21-2).

Links:

1. <http://www.hypacosmos.com/>
2. Hypakeyboard (play store or Apple store)
3. Hypagame (play store by Google search only)

Healthy cities: Change your mind to change your health

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Aimilia Papakonstantinou, Agricultural University of Athens (Greece) emiliap@aua.gr
Sector	Urban
Thematic area	Healthy cities
EQF level	Level 6 (Bachelor)
ISCED-F field	0900 Health and welfare
ESCO skills & competences	K099 – knowledge – health and welfare - health and welfare not elsewhere classified S1 – skills - communication collaboration and creativity S2 – skills - information skills T2 – transversal skills and competences - thinking skills and competences T6 – transversal skills and competences - life skills and competences
Proposed dates of the classes	29/04, 6/05, 13/05, 20/05, 27/05, 11/06 (Exam date), 12:00-14:00 (CET)
One hour for tutoring consultations	2/06, 12:00-13:00 (CET)
Date of the exam/ final assessment	11/06, 12:00-13:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 11 h Asynchronous hours & self-directed learning: 14 h
General description	By 2050, the global population will reach 10 billion, creating significant challenges for food systems amidst rising EU elderly populations, declining birth rates, and increasing life expectancy. Trends toward healthier, sustainable, and natural diets are growing, while 30% of food is wasted annually, and food production consumes 70% of global freshwater. These pressing issues make food systems innovation critical, balancing consumer demands with environmental protection and climate change adaptation. Students need this knowledge to lead in sustainable food innovation and address global challenges effectively.
Description of the content (week by week)	Unit 1. Introduction to sustainable nutrition and health (2 hours) Unit 2. New technologies for novel food production and sustainable nutrition following the farm to fork guidelines – group work (2 hours) Unit 3. Dietary guidelines and food labelling, obstacles and opportunities (2 hours)

	Unit 4. Translating sustainable nutrition to everyday practices – group work (2 hours) Unit 5. Climate change and health: thought, solution, a view to the future (2 hours)			
Importance for society	Sustainable nutrition and health literacy			
Skills (hard and soft skills)	Hard skills: Knowledge of functional ingredients and foods and understanding dietary guidelines and food labeling Soft skills: Collaboration and teamwork and critical thinking and problem-solving			
Sustainable Development Goals	SDG2. Zero hunger SDG3. Good health and well-being SDG8. Decent work and economic growth SDG9. Industry, innovation and infrastructure SDG10. Reduced inequalities SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate action SDG17. Partnerships for the goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Explain the scientific basis and interdisciplinary approaches used in the study of Sustainable Food Systems	Lectures, small group assignments and practical exercises, individual study	Written exam which includes multiple choice questions	Self-evaluation/reflection report from each individual and evaluation of team members for their contribution to the group work Requirements: work in small groups, presentation in front of colleagues, essay	Unsupervised with no identity verification
Demonstrate practical skills in the food system based on sustainability practices	Lectures, small group assignments and practical exercises, individual study	Written exam which includes multiple choice questions	Self-evaluation/reflection report from each individual and evaluation of team members for their contribution to the group work Requirements: work in small groups, presentation in front of colleagues, essay	Unsupervised with no identity verification
Bibliography	Books: 1. <i>Sustainable Healthy Diets: Guiding Principles</i> by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). This			

document provides a holistic approach to diets, considering nutrition recommendations, environmental impacts, and socio-economic contexts.

2. *Sustainable Diets: Linking Nutrition and Food Systems* edited by Barbara Burlingame and Sandro Dernini. It offers a transdisciplinary perspective, integrating health, agriculture, and environmental issues to comprehensively explore sustainable diets

Publications/articles:

1. *Sustainable Healthy Diets: Guiding Principles* by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). This document provides a holistic approach to diets, considering nutrition recommendations, environmental impacts, and socio-economic contexts.
2. *The Role of Healthy Diets in Environmentally Sustainable Food Systems* by the International Confederation of Dietetic Associations (ICDA). This paper reviews how transitions to healthier diets can advance environmental targets and contribute to sustainable food systems
3. *Sustainable Nutrition and Human Health as Part of Sustainable Development* by Magdalena Gibas-Dorna and Wioletta Zukiewicz-Sobczak. This article discusses the concept of sustainable nutrition, focusing on health-promoting diets that are culturally acceptable, accessible, and environmentally friendly.

Websites:

1. The Nutrition Source – Sustainability: Hosted by the Harvard T.H. Chan School of Public Health, this resource offers insights into the relationship between diet, health, and environmental sustainability. <https://nutritionsource.hsph.harvard.edu/sustainability/>
2. International Panel of Experts on Sustainable Food Systems (IPES-Food): This organization provides reports and publications on sustainable food systems, addressing the political economy and environmental impacts of food production and consumption. <https://ipes-food.org/>
3. Food + Planet: Cultivating a Sustainability Revolution. This platform offers resources and insights aimed at empowering health professionals to advocate for sustainable food systems, providing tools and information to integrate sustainability into nutrition practice. <https://foodandplanet.org/>

Making sustainable fashion trendy

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Andreea Apetrei-Kalveram, Catholic University of Valencia (Spain) andreea.apetrei@ucv.es
Sector	Sustainability
Thematic area	Sustainable fashion
EQF level	Level 6 (Bachelor)
ISCED-F field	0414 Marketing and advertising
ESCO skills & competences	S.2.1.1. - skills - information skills - conducting academic or market research K0319 - knowledge - social sciences, journalism and information - social and behavioural sciences - social and behavioural sciences not else classified K0410 - knowledge - business, administration and law - business and administration not further defined T.6.2. - transversal skills and competences - life skills and competences - applying environmental skills and competences
Proposed dates of the classes	30/04, 07/05, 14/05, 21/05, 28/05, 12:00-14:00 (CET)
One hour for tutoring consultations	To be announced
Date of the exam/ final assessment	28/05, 12:00-14:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	The fashion industry is the second most polluting sector in the world, following oil. From production and design to the moment our clothes reach our homes, the process requires immense amounts of water and land, while generating significant CO2 emissions. Additionally, millions of workers in this industry lack essential labour protections. In the last 5 years, the topic of sustainable fashion became popular and trendy. There are now NGOs, influencers, documentaries and events trying to raise awareness about the issues of fast fashion. As a result, consumers are increasingly looking for eco-friendly and ethically made clothes. Brands are taking notice, adopting practices like using organic materials and reducing waste. But at the same time, too many companies adopted unethical practices such as greenwashing. It is crucial to recognize the consequences of fashion production and consumption, and to take meaningful steps toward a more sustainable lifestyle.

<p>Description of the content (week by week)</p>	<p>Unit 1. Introduction: The concept of business model (2 hours)</p> <ul style="list-style-type: none"> • Explaining the fast fashion business model • What is a sustainable business model? <p>Unit 2. Fast fashion versus sustainable fashion (2 hours)</p> <ul style="list-style-type: none"> • Most and least sustainable companies - examples • Assumptions about sustainable fashion <p>Unit 3. The impact of the sector on the global environment (2 hours)</p> <ul style="list-style-type: none"> • Human capital <ul style="list-style-type: none"> - Who makes our clothes and what is their way of work? - What can be done to improve their working conditions? • Natural capital <ul style="list-style-type: none"> - Soil - Textiles: past and future <p>Unit 4. Marketing mix for sustainable fashion businesses (2 hours)</p> <ul style="list-style-type: none"> • Greenwashing • Sustainable 4Ps (Product, Price, Promotion and Place) <p>Unit 5. Conclusions: New mindset for the fashion client (as conclusions) (2 hours)</p> <ul style="list-style-type: none"> • Consumer behaviour • Changes towards a new type of consumer 			
<p>Importance for society</p>	<p>The course aims to raise awareness with regard to the impact of clothing and textiles on the people involved in the sector and our planet. The course will explain how fashion companies are being managed, how the natural and human resources are being used by the fashion companies. It will also highlight the strategies used by companies to persuade clients to constantly buy clothes. Once these practices are known by the consumers, behavioural changes are easier to be made.</p>			
<p>Skills (hard and soft skills)</p>	<p>Hard skills: Researching & Problem solving Soft skills: Decision making & Critical thinking</p>			
<p>Sustainable Development Goals</p>	<p>SDG1: No poverty SDG8: Decent work and economic growth SDG10: Reduce inequalities SDG12: Responsible consumption & production</p>			
<p>Learning outcomes</p>	<p>Study methods</p>	<p>Assessment methods</p>	<p>Assignments. Requirements/format</p>	<p>Supervision and identity verification during assessment</p>
<p>Identify and explain the impact of fast fashion and</p>	<p>Lectures and Case studies The impact of fast fashion big</p>	<p>Attendance to classes Participation to the conversations</p>	<p>Participation to the conversations based on the colleagues' presentations</p>	<p>Supervised online or onsite with identity verification.</p>

<p>fashion consumption for the planet</p>	<p>players in the world based on research data and real examples. Analysis of top companies of the industry for example: Zara, H&M, Shein, GAP, Primark.</p>	<p>created by the professor</p>	<p>To be evaluated: quality of content, depth of analysis, citation and referencing, originality, participation (at least one complete opinion), originality of the ideas, ability to connect comments to the previous content of the course.</p>	
<p>Analyse the sustainability practices within the fashion industry</p>	<p>Research Project and its presentation Based on research on practices of a chosen company, presenting findings through a report (analysis of a sustainable brand, its business model, production methods and marketing strategies).</p>	<p>Presentation prepared and presented by the student Case study: selecting a sustainable fashion brand, conducting a detailed examination of brand's sustainability practices. Presenting findings about impact and propose innovative strategies for further improvement.</p>	<p>Individual project and its presentation Requirement: presentation during the last class of the course in front of colleagues and professor Format: presentation with visual tool (Power Point / Canva / video etc)</p>	<p>Supervised online or onsite with identity verification.</p>
<p>Bibliography</p>	<p>Books:</p> <ol style="list-style-type: none"> Bravo, Lauren (2020). How To Break Up With Fast Fashion: A guilt-free guide to changing the way you shop – for good, Headline Brooks, A. (2015). Clothing poverty: The hidden world of fast fashion and second-hand clothes. London UK, Zed Books. Cline, Elizabeth (2012). Overdressed: The Shockingly High Cost of Cheap Fashion. Penguin Publishing Martin, D., & Schouten, J. (2012). Sustainable marketing. Pearson College Division. <p>Articles:</p> <ol style="list-style-type: none"> Apetrei, A., Constantin, M., Deaconu, E. M., Dinu, M., Pătărlăgeanu, S. R., & Petrescu, I. E. (2024). Eco-chic or trendy-chic? Decoding consumer preferences in sustainable and fast fashion across the EU. <i>Management & Marketing</i>, 19(2), 179-210. Alexa, L., Apetrei, A., & Sapena, J. (2021). <i>The COVID-19 lockdown effect on the intention to purchase sustainable brands</i>. Sustainability, 13(6), 3241. Alexa, L., Apetrei, A., & Pîslaru, M. (2021, November). <i>Fast Fashion – An Industry at the Intersection of Green Marketing with Greenwashing</i>. In <i>Proceedings of the 7th International Symposium “Technical Textiles—Present and Future”</i>, Iasi, Romania (pp. 263-268). <p>Websites:</p>			

1. https://www.statista.com/topics/6088/fast-fashion-in-europe/#dossierSummary__chapter1
2. <https://www.eea.europa.eu/publications/textiles-in-europes-circular-economy/textiles-in-europe-s-circular-economy>
3. <https://www.youtube.com/watch?v=YglyHzvBqpA>
4. <https://news.un.org/en/story/2019/03/1035161>

UAS principles, data modelling and analysis

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Ana-Cornelia Badea, Dragos Badea, Technical University of Civil Engineering Bucharest (Romania) ana.badea@utcb.ro ; dragos.badea@utcb.ro
Sector	Smart
Thematic area	Sustainable IT
EQF level	Level 6 (Bachelor)
ISCED-F field	0521 Environmental sciences
ESCO skills & competences	T1.3 - transversal skills and competences – core skills and competences - working with digital devices and applications T2.2 – transversal skills and competences – thinking skills and competences - planning and organising T4.3 – transversal skills and competences – social and communication skills and competences - collaborating in teams and networks S5.5 – skills – working with computers - accessing and analysing digital data S1.4.2 - skills – communication, collaboration and creativity – presenting information – presenting research or technical information
Proposed dates of the classes	02/05, 09/05, 16/05, 23/05, 30/05, 17:00-19:00 (CET)
One hour for tutoring consultations	23/05, 19:00-20:00 (CET)
Date of the exam/ final assessment	30/05, 17:00-19:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	<ul style="list-style-type: none"> • Concepts of UAVs, Flight Planning, Aerial imaging, LiDAR <ul style="list-style-type: none"> ○ Classification of drones ○ Photogrammetric data acquisition ○ Theoretical and practical elements before flying the UAS • Geospatial Data Processing using Dedicated Software <ul style="list-style-type: none"> ○ Different types of software for modeling ○ Different types of problems analyzed based on UAS images ○ Possibilities of 3D modeling based on UAS images

Description of the content (week by week)	Unit 1. Classification of drones (2 hours) Unit 2. Photogrammetric data acquisition (2 hours) Unit 3. Theoretical and practical elements before flying the UAS (1 hour) Unit 4. Different types of software for modelling (1 hour) Unit 5. Different types of problems analysed based on UAS images (2 hours) Unit 6. Possibilities of 3D modelling based on UAS images (2 hours)			
Importance for society	<p>UAS Principles, Data Modeling and Analysis has been used in various fields such as medicine, engineering, mapping, architecture, manufacturing, police investigation, cultural heritage, and geology. One of the most common uses of photogrammetry is creating maps out of aerial photos.</p> <p>It has proven to be accurate and cost-effective and accurate, allowing planning entities like architects, local governments and construction workers to make clear, informed decisions about their projects without spending months scouring the landscape</p>			
Skills (hard and soft skills)	Hard skills: Technology use, Technological literacy Soft skills: Analytical thinking, Curiosity			
Sustainable Development Goals	SDG4: Quality education SDG9: Industry, Innovation and Infrastructure SDG11: Sustainable cities and communities SDG15: Life on land			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Demonstrate knowledge on flying procedures, data expectancy, UAS pre-flight requirements, identifying steps about UAS data acquisition	1-Lectures 2-Case studies & discussions (Laboratory) 3-Tutorials	1-Time-constrained online quizzes 2-Discussions 3-Evaluation of practical skills	group work	Supervised online with identity verification
Analysing and modelling data by specific tools	1-Lectures 2-Case studies & discussions (Laboratory) 3-Tutorials	1-Time-constrained online quizzes 2-Team presentation 3-Discussions	group work	Supervised online with identity verification

Bibliography

Books:

1. McGlone, C. (2013). *Manual of Photogrammetry - Sixth Edition* ISBN 10: 1570830991 ISBN 13: 9781570830990, ASPRS
2. Wright, D., Harder, C. (2020). *GIS for Science: Applying Mapping and Spatial Analytics*, Volume 2, ISBN: 9781589485877, ESRI Press

Publications/Articles:

1. A. A. Arfakhsyad, A. N. Rahman, L. Kinanti, A. A. Awwalur Rizqi and H. N. Muhammad, "Unmanned Aerial Vehicle (UAV) Data-Driven Modeling Software with Integrated 9-Axis IMU-GPS Sensor Fusion and Data Filtering Algorithm," 2023 15th International Conference on Information Technology and Electrical Engineering (ICITEE), Chiang Mai, Thailand, 2023, pp. 167-173, doi: 10.1109/ICITEE59582.2023.10317781
2. Badea, A. C., Badea, G. - An Overview of Geoprocessing and Export Options for Creating 3D GIS Models Using Drone2Map, RevCAD 28/2020, pg. 7-14, http://revcad.uab.ro/upload/49_761_badeaa_badea.pdf
3. Badea, A. C., Badea, G. - Aspects about Spatial Information Management to optimize Spatial Planning and Sustainable Development, Workshop Joint FIG Commissions 3 and 8, 20-21 July 2021, Prato, Italy, https://www.fig.net/resources/proceedings/2021/2021_07_Comm83.asp

Websites:

1. <https://www.isprs.org/>
2. <https://www.asprs.org/>
3. <https://www.esri.com/en-us/home>

Smart green cities: An introduction

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Oana Luca, Technical University of Civil Engineering Bucharest (Romania) oana.luca@utcb.ro
Sector	Urban
Thematic area	Smart green cities
EQF level	Level 6 (Bachelor)
ISCED-F field	0731 Architecture and town planning
ESCO skills & competences	<p>K073 – knowledge – engineering, manufacturing and construction - architecture and construction</p> <p>S1.4.1 – skills – communication, collaboration and creativity – presenting information – presenting general information</p> <p>S1.8.1 – skills – communication, collaboration and creativity – working with others – working with teams</p> <p>T2.1 – transversal skills and competences – thinking skills and competences – processing information, ideas and concepts</p>
Proposed dates of the classes	05/05, 12/05, 19/05, 26/05, 02/06, 16:00-18:00 (CET)
One hour for tutoring consultations	02/06, 18:00-19:00 (CET)
Date of the exam/ final assessment	09/06, 16:00-17:00 (CET)
Synchronous & asynchronous hours	<p>Synchronous contact hours: 10 h</p> <p>Asynchronous hours & self-directed learning: 15 h</p>
General description	<p>In recent years, the topic of sustainable and smart cities has evolved due to rapid urbanization, advancements in technology, and the growing urgency to combat climate change. It has become a trending topic as cities worldwide face increasing pressure to reduce carbon emissions, improve energy efficiency, and enhance the quality of urban living. For students, gaining knowledge about this topic is crucial as it equips them with the skills and understanding needed to address the complex challenges of future urban development. Understanding smart city strategies prepares them to lead innovations in urban sustainability, energy, mobility, and circular economy.</p>

<p>Description of the content (week by week)</p>	<p>Unit 1. Introduction and definitions (1 hour)</p> <p>Unit 2. Principles and benefits of sustainable and smart strategies. Challenges and barriers. Case studies (1 hour).</p> <p>Unit 3. Renewable energy sources. Case studies (1 hour)</p> <p>Unit 4. Energy efficiency strategies. Challenges and successes in sustainable energy implementation. Good practices (1 hour)</p> <p>Unit 5. Urban Mobility Challenges. Intelligent infrastructure. Integration of Sustainable Transportation Modes with Intelligent Infrastructure (1 hour)</p> <p>Unit 6. Policy and Regulatory Frameworks for Promoting Sustainable Mobility. Future trends. Case studies (1 hour)</p> <p>Unit 7. Key concepts and strategies. Business models. Policy and Regulatory Frameworks (1 hour)</p> <p>Unit 8. Technological Innovations in circular economy. Circular economy in practice. Future trends and opportunities (1 hour)</p> <p>Unit 9. Nature based solutions in smart cities (1 hour)</p> <p>Unit 10. Project presentation (1 hour)</p>
<p>Importance for society</p>	<p>The topic of sustainable and smart cities is significant for society because it addresses the urgent need to create urban environments that are more resilient, efficient, and capable of supporting future generations. As cities grow and urban populations increase, the challenges related to resource management, pollution, traffic congestion, energy consumption, and waste disposal become more pronounced. Sustainable and smart city strategies provide innovative solutions to these challenges, promoting economic growth, environmental preservation, and social well-being.</p> <p>This topic raises awareness about the importance of integrating sustainable practices into urban planning and development. It highlights the need for cities to adopt smart energy systems that reduce reliance on non-renewable resources and enhance energy efficiency. Additionally, it emphasizes the role of sustainable mobility—such as electric public transportation and shared mobility services—in reducing emissions and improving air quality. The inclusion of circular economy principles and nature-based solutions further demonstrates the interconnectedness of urban systems, encouraging cities to minimize waste, recycle resources, and leverage natural ecosystems for better air and water quality. Raising awareness about these topics also promotes the adoption of cutting-edge technologies like smart grids, IoT (Internet of Things), and AI, which help manage resources more efficiently and improve the quality of life for residents. Ultimately, this awareness pushes society to rethink how cities are designed and operated, fostering a shared responsibility for building more sustainable, resilient, and livable urban environments. It draws attention to the need for both immediate and long-term strategies, inspiring policymakers, businesses, and citizens to collaborate in shaping a smarter, greener future.</p>

Skills (hard and soft skills)	Hard skills: 1. Analysing solutions on sustainable energy and transport. 2. Analysing policies for smart and sustainable cities Soft skills: 1. Cooperation 2. Problem thinking			
Sustainable Development Goals	SDG4. Quality education SDG6. Clean water and sanitation SDG7. Affordable and clean energy SDG9. Industry, innovation and infrastructure SDG10. Reduced inequalities SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate action			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Demonstrate the core principles of sustainable and smart cities	Presentation, discussions, group work, individual work, project.	projects, presentations prepared by students, evaluation of assignments, debates	Group work, projects. Work in pairs, presentation in front of the colleagues.	Supervised online or onsite with identity verification
Discuss the role of energy efficiency and RES in smart cities, analyse sustainable transportation options, explore and create smart mobility solutions, examine and generate green infrastructure solutions.	Presentation, discussions, group work, individual work, project.	projects, presentations prepared by students, evaluation of assignments, debates	Group work, projects. Work in pairs, presentation in front of the colleagues.	Supervised online or onsite with identity verification
Bibliography	Books: 1. Smart Cities, Lock-in, Path-dependence and Non-linearity of Digitalization and Smartification, edited by <i>Anna Visvizi and Anna Godlewska – Majkowska</i> , 1st Edition, First Published 2024, Imprint Routledge, eBook ISBN 9781003415930, https://doi.org/10.1201/9781003415930			

Publications/articles:

1. Luca, Oana, Florian Gaman, and Emanuel Răuță (2021) *Towards a National Harmonized Framework for Urban Plans and Strategies in Romania*. Sustainability 13.4: 1930.
2. Luca, Oana, et al. (2023) *Unveiling the Hidden Effects of Automated Vehicles on “Do No Significant Harm” Components*. Sustainability 15.14: 11265.
3. O'Dwyer, Edward, et al. (2019) *Smart energy systems for sustainable smart cities: Current developments, trends and future directions*. Applied energy 237: 581-597.
4. Kim, Hakpyeong, et al. (2021) *A systematic review of the smart energy conservation system: From smart homes to sustainable smart cities*. Renewable and sustainable energy reviews 140: 110755.
5. Oral, Hasan Volkan, et al. (2020) *A review of nature-based solutions for urban water management in European circular cities: a critical assessment based on case studies and literature*. Blue-Green Systems 2.1: 112-136.

Websites:

1. <https://www.bable-smartcities.eu/home.html>
2. <https://www.smart-cities.eu>
3. <https://smart-cities-marketplace.ec.europa.eu/projects-and-sites>

Animal welfare in research labs

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Emmanouil Malandrakis, Agricultural University of Athens (Greece) emalandrak@aua.gr
Sector	University
Thematic area	Ethics/Bioethics
EQF level	Level 6 (Bachelor)
ISCED-F field	0899 Agriculture, forestry, fisheries and veterinary not elsewhere classified
ESCO skills & competences	K0920 – knowledge – health and welfare – welfare - welfare not further defined K0831 – knowledge – agriculture, forestry, fisheries and veterinary – fisheries - fisheries S6.9.0 – skills – handling and moving - handling animals – handling animals
Proposed dates of the classes	05/05, 12/05, 19/05, 26/05, 02/06, 10:00-12:00 (CET)
One hour for tutoring consultations	27/05, 10:00-11:00 (CET)
Date of the exam/ final assessment	02/06, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	After the successful completion of the Program, the students will be able to demonstrate responsibility for implementing, monitoring, and maintaining the right conditions for Experimental Animals.
Description of the content (week by week)	Unit 1. Introduction - Stress and Welfare in Experimental Animals (2 hours) Unit 2. National and international legislation regarding the handling of laboratory animals (2 hours) Unit 3. Fundamental knowledge of laboratory animal care (2 hours) Unit 4. Statistical analysis and data processing of animal experimental data (2 hours) Unit 5. Written exams (2 hours)
Importance for society	This micro-credential is expected to yield substantial social, economic, and environmental benefits, promoting sustainable production practices and ensuring the welfare of the animals involved.

Skills (hard and soft skills)	Hard skills: <ul style="list-style-type: none"> • Fish care in laboratory conditions, • Legislation about animal experimentation (European and national) • Statistical analysis for fish experimentation (power analysis, Analysis of variance etc.). Soft skills: <ul style="list-style-type: none"> • Oral and written communication skills, • Critical thinking skills, • Problem-solving skills. 			
Sustainable Development Goals	SDG4. Quality education SDG9. Industry, innovation and infrastructure SDG14. Life below water			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Analyze fundamental concepts of fish stress physiology	Lecture, presentations, discussions	Written exams	Students will be required to discuss their ideas with colleagues.	Supervised online with identity verification.
Plan fish handling and experimentation in the lab	Lecture, presentations, discussions	Written exams	Students will be required to discuss their ideas with colleagues.	Supervised online with identity verification.
Bibliography	Books: <ol style="list-style-type: none"> 1. <i>The Welfare of Fish</i>, 2020. Kristiansen S. Tore, Fernö Anders, Pavlidis A. Michalis, Hans van de Vis. Springer Publications/articles: <ol style="list-style-type: none"> 1. M. Toni, A. Manciooco, E. Angiulli, E. Alleva, C. Cioni, S. Malavasi, (2019) <i>Review: Assessing fish welfare in research and aquaculture, with a focus on European directives</i>, <i>Animal</i>, 13 (1):161-170 2. Paul J. Ashley (2007) <i>Fish welfare: Current issues in aquaculture</i>, <i>Applied Animal Behaviour Science</i>, 104, (3–4): 199-235 Websites: <ol style="list-style-type: none"> 1. https://www.efsa.europa.eu/en/topics/topic/fish-welfare 2. https://fishfromgreece.com/en/nea/approval-of-the-mediterranean-fish-welfare-as-national-guide/ 3. https://www.fao.org/family-farming/detail/en/c/1068913/ 			

Environmental monitoring and indicators

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Sofia Mavrikou, Agricultural University of Athens (Greece) sophie_mav@aua.gr Assistant Professor: Chrysi Papadimitriou, cpapadim@aua.gr
Sector	Coastal
Thematic area	Water management
EQF level	Level 6 (Bachelor)
ISCED-F field	0521 Environmental sciences
ESCO skills & competences	S1.4.2 - presenting research or technical information S2.2.1 - preparing financial documents, records, reports, or budgets T1.3 - working with digital devices and applications
Proposed dates of the classes	06/05, 13/05, 20/05, 27/05, 03/06, 10:00-12:00 (CET)
One hour for tutoring consultations	28/05, 10:00-11:00 (CET)
Date of the exam/ final assessment	03/06, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	Training in the science of environmental monitoring and methods for identifying relevant indicators, including but not limited to the acquisition of environmental data over time to observe or detect changes in key variables. Such monitoring typically focuses on environmental management objectives and, by extension, on assessing potential harmful effects of human impacts, biodiversity and changes in ecological quality over time.
Description of the content (week by week)	Unit 1. The Water Framework Directive (1 hour) Unit 2. Standard classification of rivers (0,5 hour) Unit 3. Criteria for the selection of reference areas and definition of reference conditions (0,5 hour) Unit 4. Introduction to environmental indicators (0,5 hour) Unit 5. Characteristics for the development of indicators (0,5 hour)

	Unit 6. Main types & selection of indicators (0,5 hour) Unit 7. Indicators of the aquatic environment (0,5 hour) Unit 8. Sampling methods and design (1 hour) Unit 9. Data analysis (1 hour) Unit 10. Species-based indicators (0,5 hour) Unit 11. Indicators for river ecological status studies (0,5 hour) Unit 12. Organisms used (0,5 hour) Unit 13. Necessities, periodicity and regulations (0,5 hour) Unit 14. Exam (2 hour)			
Importance for society	This micro-credential will have a significant social, economic and environmental impact and will contribute to achieving an appropriate type of environmental monitoring and further analysis to draw statistically sound conclusions. The proposed programme is fully in line with the 17 UN Sustainable Development Goals as it covers areas that include primarily social (environmental awareness, provision of education, remote and multilingual training with practical application) and environmental sustainability (maintaining ecological quality, biodiversity conservation, protection of water resources) and secondarily economic sustainability (training individuals in modern environmental monitoring methods).			
Skills (hard and soft skills)	Hard skills: Promoting environmental awareness, Develop skills in environmental tools for assessing ecological quality Soft skills: Critical thinking skills, Problem-solving skills.			
Sustainable Development Goals	SDG3. Good health and well-being SDG4. Quality education SDG6. Clean water and sanitation SDG10. Reduced inequalities SDG11. Sustainable cities and communities SDG12. Responsible consumption and production SDG13. Climate action SDG14. Life below water SDG15. Life on land SDG17. Partnerships for the goals			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Use indicators for the assessment of environmental and ecological quality	Lecture, presentations, discussions	Exams	Presentation in front of the colleagues	Supervised online or onsite with identity verification

Design and implement an integrated environmental and ecological quality monitoring system	Lecture, presentations, discussions	Exams	Presentation in front of the colleagues	Supervised online or onsite with identity verification
Bibliography	<p>Book: Günther, O., Radermacher, F.J., & Riekert, W. (1995). <i>Environmental monitoring: Models, methods and systems</i>.</p> <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Anuj, K., Hiesik, K., and Gerhard, P.H. <i>Environmental Monitoring Systems: A Review</i>, 2013, IEEE SENSORS JOURNAL, 13, 4. 2. Šećerov, I. , Dolinaj, D. , Pavić, D. , Milošević, D. , Savić, S. , Popov, S. and Živanov, Ž. (2019) <i>Environmental Monitoring Systems: Review and Future Development</i>. <i>Wireless Engineering and Technology</i>, 10, 1-18. doi: 10.4236/wet.2019.101001. 3. Puig, M., Darbra, R.M., <i>Innovations and insights in environmental monitoring and assessment in port areas</i>, 2024, Current Opinion in Environmental Sustainability, 70, 101472, doi:10.1016/j.cosust.2024.101472. 			

Marine ecosystem services and the impact of the Invasive Alien Species in the Mediterranean Sea

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Stefanos Kalogirou, Agricultural University of Athens (Greece) stefanos.kalogirou@aua.gr
Sector	Coastal
Thematic area	Ecosystem services
EQF level	Level 6 (Bachelor)
ISCED-F field	0521 Environmental sciences
ESCO skills & competences	K0521 - knowledge – natural sciences, mathematics and statistics – environment - environmental sciences K0522 - knowledge – natural sciences, mathematics and statistics – environment - natural environments and wildlife T6.2 – transversal skills and competences – life skills and competences - applying environmental skills and competencies
Proposed dates of the classes	07/05, 14/05, 21/05, 28/05, 01/06, 10:00-12:00 (CET)
One hour for tutoring consultations	27/05, 10:00-11:00 (CET)
Date of the exam/ final assessment	01/06, 10:00-12:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	This micro-credential offers an in-depth exploration of marine ecosystem services and the impacts of invasive species, emphasizing their ecological importance. The topic has evolved with a growing understanding of ecological interactions and the critical services marine ecosystems provide, driven by climate change, biodiversity loss, and public awareness. Understanding these concepts equips students with the skills to contribute to sustainable management practices and policies, opening diverse career opportunities. The course fosters critical thinking and problem-solving abilities, preparing students to engage with global conservation efforts.
Description of the content (week by week)	Unit 1. Introduction to marine ecosystems and their functioning - ecosystem services (2 hours)

	<p>Unit 2. Marine ecosystem services and their functioning - Ecology to study Invasive Alien Species (2 hours)</p> <p>Unit 3. In-depth study of invasive alien species and their impact on marine ecosystem services in the Mediterranean Sea. Case studies of invasive species (2 hours)</p> <p>Unit 4. Case studies of invasive species (2 hours)</p> <p>Unit 5. Exam session (2 hours)</p>			
Importance for society	<p>The significance for society lies in understanding the essential services marine ecosystems provide that invasive species can disrupt, leading to significant ecological and socioeconomic changes. This topic highlights the need for proactive conservation efforts, informed policy-making, and community engagement to protect marine environments. Increased attention to these issues fosters a sense of responsibility and encourages actions toward sustainability and resilience.</p>			
Skills (hard and soft skills)	<p>Hard skills:</p> <ul style="list-style-type: none"> • Knowledge of basic concepts related to marine ecosystems and ecosystem services • Knowledge of basic concepts related to marine invasive species • Identification of key invasive species • Impacts of key invasive species <p>Soft skills:</p> <ul style="list-style-type: none"> • Critical thinking: Students will enhance their ability to approach problems from multiple perspectives and make informed decisions. • Collaboration: Students will improve their skills in working effectively with others, including interdisciplinary teams and stakeholders. 			
Sustainable Development Goals	<p>SDG13. Climate action</p> <p>SDG14. Life below water</p> <p>SDG17. Partnerships for the goals</p>			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements /format	Supervision and identity verification during assessment
Explain the processes and the ecosystem services of Mediterranean marine ecosystems.	Presentations, Group work, Exams	Presentation (50%) Written Exams (50%)	Students will be required to discuss their ideas with colleagues	Supervised online with identity verification
Outline the concepts related to alien invasive species and	Presentations, Group work, Exams	Presentation (50%) Written Exams (50%)	Students will be required to discuss their ideas with colleagues	Supervised online with identity verification

<p>recognize the most common ones; Discuss the impact of the alien invasive species on native endemic organisms, the ecosystem, and ecosystem services.</p>				
<p>Bibliography</p>	<p>Books: Fifty Years of Invasion Ecology: The Legacy of Charles Elton, 2010. David M. Richardson, Blackwell Publishing Ltd</p> <p>Publications/articles:</p> <ol style="list-style-type: none"> 1. Katsanevakis S., Wallentinus I., Zenetos A., Leppäkoski E., Çinar M. E., Oztürk B., Grabowski M., Golani D. and Cardoso A. C. (2014). <i>Impacts of invasive alien marine species on ecosystem services and biodiversity: a pan-European</i>. Review: Aquatic Invasions Volume 9, Issue 4: 391–423 2. Liqueste, C., Piroddi, C., Macías, D. et al. (2016). <i>Ecosystem services sustainability in the Mediterranean Sea: assessment of status and trends using multiple modelling approaches</i>. Sci Rep 6, 34162 (2016). 3. Basconi, L., Rova, S., Stocco, A., & Pranovi, F. (2023). Ecosystem services for supporting coastal and marine resources management, an example from the Adriatic sea (Central Mediterranean sea). <i>Ocean & Coastal Management</i>, 235, 106486. <p>Websites:</p> <ol style="list-style-type: none"> 1. https://easin.jrc.ec.europa.eu/easin 			

Management strategies of plant diversity for sustainable development

[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Jorge Juan Vicedo, Catholic University of Valencia (Spain) jorge.juan@ucv.es
Sector	Sustainability
Thematic area	Sustainable Management
<u>EQF level</u>	Level 6 (Bachelor)
<u>ISCED-F field</u>	0522 Natural environments and wildlife; 0810 Agriculture
ESCO skills & competences	T4.1 – transversal skills and competences - communicating K0522 - knowledge - natural environments and wildlife - natural areas maintenance S1.9.0 – skills - solving problems S2.3.0 – skills - managing information - manage data
Proposed dates of the classes	7/05, 14/05, 21/05, 28/05, 30/05, 15:30-17:30 (CET)
One hour for tutoring consultations	28/05, (18:00-19:00 CET)
Date of the exam/ final assessment	30/05, 15:30-16:30 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	<p>This learning unit will offer a general, and interdisciplinary approach, on the current strategies for the management of wild plants as a resource for sustainable economic development. This includes the updated legal frameworks, the ongoing world actions, and the advances in Biotech applied to the plant resources management.</p> <p>This background will provide the principles of plant diversity management to face important current challenges such as the global food security, preservation and use of genetic resources for industries, and Biodiversity conservation, under the principles of the UN Sustainable Development Goals.</p>
Description of the content	<p>Unit 1. Introduction to Plant Diversity (2 hours):</p> <ul style="list-style-type: none"> - Plant Diversity. - Wild plants, crop plants and wild crop relatives.

	<ul style="list-style-type: none"> - Sustainable development and the need of plant diversity management <p>Unit 2. Economic value of plant diversity and plant genetic resources (2 hours)</p> <ul style="list-style-type: none"> - Crop plants, and wild crop relatives with economic value. - Wild plants as a reservoir of resources for economic development. <p>Unit 3. International Standards for Plant Management (2 hours):</p> <ul style="list-style-type: none"> - Global actions in plant diversity management. - Legal frameworks for plant diversity management. <p>Unit 4. Plant diversity management (2 hours).</p> <ul style="list-style-type: none"> - Current strategies for crop plants management. - Wild plants management and plant diversity conservation. - Tutoring and consultation. <p>Unit 5. Assessment session (2 hours)</p> <ul style="list-style-type: none"> - Final assessment. - Overview of the course. 			
Importance for society	To increase the awareness on the current opportunities that plant management strategies offer to society for the industry, and the conservation of nature, to ensure food security, and sustainable development.			
Skills (hard and soft skills)	Hard skills: Plant diversity management, Data analysis Soft skills: Communication, Problem solving			
SDGs	SDG1. No poverty SDG2. Zero hunger SDG12. Responsible consumption and production SDG15. Life on land			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Comprehend the current strategies in plant diversity management	Lectures and case-study exercises	Multiple choice test, case study exercises	Individual works: exercises to be submitted in the platform	Supervised online with identity verification
Identify the most suitable plant resource or strategy for development, and innovation in some fields of applications	Lectures and case-study exercises	Multiple choice test, case study exercises	Individual works: exercises to be submitted in the platform	Supervised online with identity verification

Bibliography

Books:

1. Nigel Maxted, Danny Hunter, Rodomiro Ortiz Ríos. **2020**. Plant Genetic Conservation. Cambridge University Press.
2. Kerry Ten Kate, Sarah A Laird. **2019**. The Commercial Use of Biodiversity. Routledge Taylor & Francis Group.

Publications/articles:

1. Barba-Espin, G.; Acosta-Motos, J.R. Crop Genetic Resources: An Overview. *Agronomy* **2022**, *12*, 340.
<https://doi.org/10.3390/agronomy12020340>
2. Borelli, T.; Hunter, D.; Powell, B.; Ulian, T.; Mattana, E.; Termote, C.; Pawera, L.; Beltrame, D.; Penafiel, D.; Tan, A.; et al. Born to Eat Wild: An Integrated Conservation Approach to Secure Wild Food Plants for Food Security and Nutrition. *Plants* **2020**, *9*, 1299.
<https://doi.org/10.3390/plants9101299>
3. Gordon M. Hickey, Mariève Pouliot, Carsten Smith-Hall, Sven Wunder, Martin R. Nielsen, Quantifying the economic contribution of wild food harvests to rural livelihoods: A global-comparative analysis. *Food Policy* **2016**, *62*, 122-132, <https://doi.org/10.1016/j.foodpol.2016.06.001>.
4. Gras, A.; Garnatje, T.; Marín, J.; Parada, M.; Sala, E.; Talavera, M.; Vallès, J. The Power of Wild Plants in Feeding Humanity: A Meta-Analytic Ethnobotanical Approach in the Catalan Linguistic Area. *Foods* **2021**, *10*, 61. <https://doi.org/10.3390/foods10010061>
5. Salgotra, R.K.; Chauhan, B.S. Genetic Diversity, Conservation, and Utilization of Plant Genetic Resources. *Genes* **2023**, *14*, 174.
<https://doi.org/10.3390/genes14010174>
6. Shelef O, Weisberg PJ and Provenza FD. **2017**, The Value of Native Plants and Local Production in an Era of Global Agriculture. *Front. Plant Sci.* 8:2069. doi: 10.3389/fpls.2017.02069

Websites:

1. <https://www.fao.org/plant-treaty/en/>
2. <https://www.croptrust.org/work/svalbard-global-seed-vault/>
3. <https://ser-sid.org/>
4. <https://wfoplantlist.org/>

Landscapes for exploring language and culture
[\(link to the website and registration platform available here\)](#)

Professor's name, university & email	Anita Pavić Pintarić, University of Zadar (Croatia) apintari@unizd.hr
Sector	European
Thematic area	Intercultural communication/multilingualism
EQF level	Level 6 (Bachelor)
ISCED-F field	0232 Literature and linguistics
ESCO skills & competences	K0232 - knowledge - arts and humanities - languages - literature and linguistics – linguistics L1 - Language skills and knowledge - languages S1.15.1 – skills – communication, collaboration and creativity – using more than one language – using foreign languages
Proposed dates of the classes	21/05, 28/05, 04/06, 11/06, 18/06, 15:00-17:00 (CET)
One hour for tutoring consultations	13/06, 09:00-10:00 (CET)
Date of the exam/ final assessment	18/06, 15:00-17:00 (CET)
Synchronous & asynchronous hours	Synchronous contact hours: 10 h Asynchronous hours & self-directed learning: 15 h
General description	Talking about space we live in has become essential, among others due to climate change, sustainability, and migrations for various reasons. Learning about the linguistics of space can be one of the steps how to acknowledge and start seeking for solutions of various problems connected to the landscape. The aim of this course is to teach students how to identify expressions of space used when talking about landscapes connected to sea, how to use them in an intercultural setting, how to address contemporary challenges from the linguistic perspective.
Description of the content (week by week)	Unit 1: Introduction into the linguistics of space (2 hours) Unit 2: Expressions of space (4 hours) Unit 3: Expressions of movement (4 hours) Unit 4: Phrasemes (3 hours)

	Unit 5: Metaphors (3 hours) Unit 6: Loanwords (3 hours) Unit 7: Final Presentations (4 hours) Unit 8: Conclusion (2 hours)			
Importance for society	Societies are experiencing changes due to a number of economic and political reasons. It is therefore important for society members to develop language awareness, among other competences, in order to recognize developments in language concerning the way of life in a landscape. These could influence transferable skills and possibly practices for problem solving. Gradually, such knowledge can be implemented into different policies.			
Skills (hard and soft skills)	Hard skills: Work with corpus, Linguistic knowledge Soft skills: Cooperation, Oral presentations			
Sustainable Development Goals	SDG4: Quality of education SDG8: Decent work and economic growth			
Learning outcomes	Study methods	Assessment methods	Assignments. Requirements/format	Supervision and identity verification during assessment
Define expressions that belong to the linguistics of space	Lectures	Continual assessment of knowledge of basic terms and approaches presented in lectures	Acquiring basic knowledge about linguistics of space in the lecture, reading material in the Moodle	Supervised online with identity verification.
Relate the expressions with intercultural knowledge (through language contact, metaphorical concepts, cultural specificity)	Group work Individual work	Search for expressions for space and their analysis Final presentation in English of research done on their mother tongue	Students will search for space expressions in dictionaries and available databases or in interviews with their colleagues. They will describe the expressions according to their structure, meaning and concepts	Supervised online with identity verification.
Bibliography	Books: <ol style="list-style-type: none"> Levinson, Stephen C. (2003). <i>Space in Language and Cognition. Explorations in Cognitive Diversity</i>. Cambridge: Cambridge University Press. 			

2. Pavić Pintarić, Anita; Škifić, Sanja (2021). *Prostor i kretanje u govorima zadarskoga kraja*. Zadar: Sveučilište u Zadru.

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2. Higgins, Christina (2017). Space, place, and language. U: Canagarajah, Suresh (ur.). *The Routledge Handbook of Migration and Language*. London i New York: Routledge, 102-116.
3. Pavić Pintarić, Anita, Škifić, Sanja (2018). A Loanword as a Marker of Spatial Movement: The Case of Špancirfest. *Jezikoslovni zapiski*, 24,2, 113-130.
4. Pavić Pintarić, Anita (2019). Deutsche und kroatische Phraseme zum Ausdruck des Raumes. *Linguistica* 59 (1), 209-220.