University of Gdańsk

Subject card

Subject name and code	Circular Economy , PG_00200421						
Field of study	Logistics and Mobility						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		English		
Semester of study	6		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Marcin Wołek, prof. UG				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		0.0		20.0	50
Subject objectives	To provide specific knowledge on the circular economy, including circular supply chains.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[LML3_W05] has a knowledge of a human being as an entity that creates social structures and the principles of their functioning	Students will have advanced knowledge of the role of individuals and communities in shaping circular economy models and mechanisms for collaboration towards sustainable development. They will also understand how values, social norms, and behaviors influence the creation of structures that support circularity.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[LML3_K06] is ready to be guided in his professional life by business ethics and corporate social responsibility, respect for others and be loyal to his employer	The student is prepared to make professional decisions consistent with the principles of ethics and corporate social responsibility in the context of implementing a circular economy. They demonstrate respect for stakeholders and loyalty to organizations pursuing sustainable development goals.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
[LML3_U04] is able to predict the course of logistics and mobility processes and systems	Students can analyze and predict the impact of implementing circular economy principles on logistics processes and mobility systems. They also consider environmental, technological, and organizational variables in the context of sustainable development.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[LML3_U14] can appropriately set priorities and plan and organize the tasks involved in their implementation, as well as monitor and evaluate progress	The student is able to set priorities and plan, organize and monitor activities related to the implementation of the principles of the circular economy in the context of environmental and business challenges.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[LML3_W09] has advanced knowledge of the evolution of theories describing logistics and mobility	The student will have advanced knowledge of the development of logistics and mobility concepts in the context of the transition from linear to circular models. They can explain how changing paradigms influence the design of sustainable logistics and mobility systems.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion

Subject contents	1. Introduction to the Circular Economy • The concept of sustainable development • Renewable and non-renewable resources and environmental economics • United Nations Sustainable Development Goals (SDGs) 2. What is the Circular Economy? • Why the circular economy? (Inefficiencies of traditional business models) • Evolution of the circular economy concept • Limitations of the circular economy 3. Circular Economy as an Element of Corporate Social Responsibility (CSR) • Economic, social, and environmental potential of the circular economy • Circular economy as an element of non-financial reporting • Implementation of the circular economy in a company 4. Levels of Circular Economy Implementation (macro, meso, micro) • Circular economy at the macroeconomic level [EU Action Plan for the Circular Economy, comparison of country profiles exercise] • Circular economy at the mesoeconomic level (region and metropolitan area) • Circular economy at the microeconomic level (enterprise and organization) 5. Impact of the Circular Economy on Business Models • What is a business model • Green business models • Circular economy in business models 6. Measuring the Impact of the Circular Economy • Circulations (technical circulations, bio-based circulations) • Carbon footprint • RESOLVE framework • Introduction to Life Cycle Assessment (LCA) • Environmental impact assessment • Setting standard indicators for monitoring and evaluating the circular economy 7. Circular Supply Chains • Introduction to Closed-Loop Supply Chain Management (CLSCM) • CLSCM in enterprises and logistics operators • Case studies of CLSCM in various sectors (e.g., pharmaceutical, food, FMCG) 8. Circular Economy and Processes in Organizations • Introduction to Business Process Management (BPM) • Mapping and measuring business processes • KPIs for the circular economy in business process management 9. Governing the Circular Economy in the Urban Context • Introduction to urban resource management • Case studies of the circular economy in water management (e.g., sponge city) and other resource management areas (e.g., green city, resilient city) • Circular economy in the strategic context of selected cities 10. Circular Economy in the Transport Sector Using the Circularity Compass • Circular economy in infrastructure management case studies based on the CE4CE project • Circular economy in fleet management case studies based on the CE4CE project • Circular economy in energy, fuels, and similar resources case studies based on the CE4CE project 11. Circular Economy in Practice: Study Visit to the Tram Depot of GAiT Ltd. (Urban Public Transport Operator in Gdańsk) equivalent of 4 lecture hours 12. Circular Economy in the Automotive Sector • CLSCM in the automotive industry Any doubts related to the discussed topics can be clarified (discussed) with the Instructor during consultation hours. Any doubts related to the issues discussed can be dispelled (discussed) with the Leader during the consultation.

Prerequisites and co-requisites		
Assessment methods and criteria		

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	100.0%

Recommended reading	Basic literature	C. Weetman: A Circular Economy Handbook for Business and Supply Chains. Kogan Page 2017 H. Lehmann and others: The Impossibilities of the Circular Economy: Separating Aspirations From Reality. Routledge. 2023 The Circularity Gap Report 2024. Circle Foundation 2024. World Economic Forum publications on the Circular Economy
	Supplementary literature	Universal circular economy policy goals Enabling the transition to scale. Ellen MacArthur Foundation, 2021
	eResources addresses	
Example issues/ example questions/ tasks being completed	What is greenwashing? Please provide an example from the selected industry. What is the difference between linear and circular model? Circular economy elements at a country's level. Environmental Impact Assessment in the circular economy. An evaluation of the circularity level of a selected city. Carbon footprint in the evaluation of circularity. Life Cycle Assessment in the evaluation of circularity. Circularity at a household level. Circularity in supply chains.	
Work placement	Not applicable	

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