



Fundusze Europejskie  
dla Rozwoju Społecznego



Rzeczpospolita  
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Unię Europejską



NAWA  
NARODOWA AGENCJA  
WYMIANY AKADEMICKIEJ

## DESCRIPTION OF THE SAFE\_06 MODULE IMPLEMENTED AS PART OF THE INTENSIVE FORM OF EDUCATION (IFoE)

<b>Module Name</b>	<i>Circular economy</i>			
<b>Language of Instruction</b>	english			
<b>Module Purpose</b>	The aim of this module is to familiarize students with the principles of the circular economy, as a regenerative economic system that minimizes resource consumption and waste generation. The module will help them understand the role of circular economy in the modern world, learn about examples of solutions implementing the circular economy, and explore materials created through practical application of circular economy.			
<b>Module Content</b>	The lecture covers the contemporary approach to waste management, including a comparison of the circular and linear economy models; the importance of circular economy for the economy and the environment in relation to the principles of sustainable development; the hierarchy, principles, goals, and methods of implementing circular economy in the context of business transformation. During the exercises, examples of materials that can be produced from waste (including fuels from waste, digestate from biogas plants, etc.), as well as their production technologies and use, are presented.			
<b>Description of learning outcomes</b>	Effect Symbol	Effect Name Methods	Verification and Documentation	Reference to Directional Effect Set
	KNOWLEDGE (graduate knows and understands)			
	W1	technologies and processes to reduce waste generation and its inclusion in production chains, limiting the burden on the environment	written test	SAFE_W01
	W2	the principles of the circular economy and its compatibility with the sustainable development of the economy and society	written test	SAFE_W02
	SKILLS (graduate can)			
	U1	indicate technological solutions to reduce waste generation and its management in line with the circular economy	written test	SAFE_U01
	U2	justify the position in the discussion, indicating the validity of solutions regarding the circular economy	documentation of class activities	SAFE_U04

“Project ‘Specialist in Agricultural and Food Engineering in the context of Green and Digital Transformation (Twin Transition)’ is financed from the European Funds for Social Development 2021-2027 (EFSD), under the NAWA project ‘Support for the creation and implementation of international education programmes’, project no. FERS.01.05-IP.08-0436/23.



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	SOCIAL COMPETENCES (graduate is ready to)			
	K1	taking actions aimed at implementing the principles of the circular economy in professional activities and in the immediate environment	documentation of class activities	SAFE_K01
Module crediting method	Passing with a grade			
ECTS credit balance (total, developing practical skills, from classes conducted using distance learning methods and techniques)	Number of contact hours/ECTS points		Number of non-contact hours/ECTS points	
	Lectures (hours 2 ECTS points 0.08)		Reading literature (hours 1 ECTS points 0.04)	
	Classes (hours 1 ECTS points 0.04)		Preparing for credit (hours 1 ECTS points 0.04)	
	Total contact hours 3 hr. 0.12 pt. ECTS		Total non-contact hours 2 hr. 0.08 pt. ECTS	
Staffing	Alina Kowalczyk-Juško			
Information on the infrastructure ensuring the implementation of learning outcomes	- multimedia presentation equipment (computer and projector) - materials made from waste (RDF fuel, digestate in bulk and granular form) - teaching buildings equipped with elevators and step-free rooms, making the facility accessible to people with disabilities			
Planned teaching methods	lecture using multimedia presentations, exercises			
Recommended reading list	– Brizga J., El Khadraoui S.: The Circular Economy and Green Jobs in the EU and Beyond. Foundation for European Progressive Studies, 2022. - Tambovceva A., Titko J.: Introduction to Circular Economy. EKA University of Applied Science, Latvia, 2020.			

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