


**KAPITAŁ LUDZKI**  
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez  
 Unię Europejską w ramach  
 Europejskiego Funduszu  
 Społecznego

**UNIA EUROPEJSKA**  
 EUROPEJSKI  
 FUNDUSZ SPOŁECZNY


<b>Course title</b>		<b>ECTS code</b>	
Eco-innovation strategies		13.3.1205	
<b>Name of unit administrating study</b>			
null			
<b>Studies</b>			
<b>faculty</b>	<b>field of study</b>	<b>type</b>	first tier studies (BA)
Faculty of Chemistry	Chemical Business	<b>form</b>	full-time
		<b>specialty</b>	all
		<b>specialization</b>	all
Faculty of Chemistry	Chemistry	<b>type</b>	first tier studies (BA)
		<b>form</b>	full-time
		<b>specialty</b>	all
Faculty of Chemistry	Environmental Protection	<b>specialization</b>	all
		<b>type</b>	first tier studies (BA)
		<b>form</b>	full-time
		<b>specialty</b>	all
		<b>specialization</b>	all
<b>Teaching staff</b>			
prof. dr hab. Ewa Siedlecka; dr Aleksandra Bielicka-Gieldoń			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b>	
<b>Forms of classes</b>		2	
Auditorium classes		auditorium classes - 15 h	
<b>The realization of activities</b>		tutorial classes – 5 h	
classroom instruction		student's work – 30 h	
<b>Number of hours</b>		Total: 50 h - 2 ECTS	
Auditorium classes: 15 hours			
<b>The academic cycle</b>			
2024/2025 summer semester			
<b>Type of course</b>		<b>Language of instruction</b>	
an elective course		english	
<b>Teaching methods</b>		<b>Form and method of assessment and basic criteria for evaluation or examination requirements</b>	
Auditorium classes carried out by the project method with the use of multimedia presentations presented by the teacher and students, discussion and proposing eco-innovative solutions related to various aspects of the functioning of industry, rural areas and cities, and people's everyday life.		<b>Final evaluation</b>	
		Graded credit	
		<b>Assessment methods</b>	
		multimedia presentation, report, test	
		<b>The basic criteria for evaluation</b>	
		Auditorium classes: a positive note from multimedia presentation, report and test. The final note is an average from notes from multimedia presentation, report and test:	
		91-100%: 5.0	
		81-90%: 4.5	
		71-80%: 4.0	
		61-70%: 3.5	
		51-60%: 3.0	
		< 51%: 2.0	
<b>Method of verifying required learning outcomes</b>			
<b>Required courses and introductory requirements</b>			
<b>A. Formal requirements</b>			
lack			

<b>B. Prerequisites</b>	
lack	
<b>Aims of education</b>	
Familiarise students with eco-innovative solutions related to various aspects of the functioning of industry, rural areas and cities, and people's everyday lives.	
<b>Course contents</b>	
Eco-innovations as the introduction of any new or significantly improved product (good or service), process, organisational change or marketing solution that reduces the use of natural resources (including materials, energy, water and land) and decreases the release of harmful substances across the whole life-cycle. Discussing and proposing solutions concerning various types of eco-innovation: technological, social, organisational, institutional and marketing. Identifying the benefits of implementing eco-innovations in industry, rural and urban areas, and people's everyday lives.	
<b>Bibliography of literature</b>	
Literature required to pass the course scientific articles indicated by the teachers	
<b>The learning outcomes (for the field of study and specialization)</b>	<b>Knowledge</b>
Chemical Business: K_BCh_W05 describes at an advanced level the life cycle of devices, facilities and technical systems as well as modern environment-friendly technical solutions K_BC_W06 enumerates unit processes and describes issues in the field of technology and chemical engineering K_BCh_U01 on the basis of the acquired knowledge, identifies, analyses and solves engineering tasks and problems in broadly understood chemistry K_BCh_U05 evaluates the usefulness and functioning of existing engineering and technical solutions as well as research and measurement methods in the chemical industry K_BCh_K01 identifies the level of her/his own knowledge and skills as well as the need to update engineering knowledge, continuous professional training and personal development Chemistry: K_W03 explains at an advanced level the relationship between the structure of matter and its observed properties K_W05 has advanced knowledge of the chemical specialisation studied K_U01 identifies, analyses and solves problems in the field of broadly understood chemistry on the basis of the acquired knowledge K_U11 prepares and presents oral presentations in various fields of chemistry in Polish and English, using acquired knowledge and skills as well as basic sources of scientific information K_K06 raises her/his professional and personal competences by using information provided in various sources Environmental Protection: K_OŚI_W07 explains at an advanced level the causal relationship between the content of specific pollutants and the state of the environment (including human health) and the occurrence of adverse phenomena on a local, regional and global scale K_OŚI_W08 explains in an advanced degree the mechanisms of economic and consumer pressure on the environment and recognises the possibilities of reducing it using the latest knowledge and scientific achievements	Students: defining eco-innovations; discussing and proposing solutions concerning various types of eco-innovation; Identifying the benefits of implementing eco-innovations in industry, rural and urban areas, and people's everyday lives
	<b>Skills</b>
	Students: propose the solutions to environmental problems connected with reducing the use of natural resources and decreases the release of harmful substances across the whole life-cycle of a product; explain relations between the environment pollution and proposed eco-innovations;
	<b>Social competence</b>
	Students: understand the need for learning, inspire others for learning; cooperate in a group, taking different roles; exhibit creativity in the determination of priorities necessary for the realisation of various tasks; understand social aspects of practical use of knowledge and abilities as well as connected with their responsibility.

<p>K_OŚI_U06 uses available sources of information and understands literature in the field of environmental protection, chemistry and natural sciences</p> <p>K_OŚI_K05 identifies the level of her/his knowledge and skills, demonstrates the need to update knowledge about the environment and its protection, demonstrates the need for continuous professional training and personal development</p>	
---	--

**Contact**

[ewa.siedlecka@ug.edu.pl](mailto:ewa.siedlecka@ug.edu.pl)