


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


Course title		ECTS code	
Eco-innovation strategies		13.3.1205	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	pierwszego stopnia
Wydział Chemii	Biznes chemiczny	form	stacjonarne
		specjalty	wszystkie
		specialization	wszystkie
Wydział Chemii	Chemia	type	pierwszego stopnia
		form	stacjonarne
		specjalty	chemia biomedyczna, chemia kosmetyków, analityka i diagnostyka chemiczna, chemia żywności
Wydział Chemii	Ochrona środowiska	specialization	wszystkie
		type	pierwszego stopnia
		form	stacjonarne
		specjalty	wszystkie
		specialization	wszystkie
Teaching staff			
prof. dr hab. Ewa Siedlecka; dr Aleksandra Bielicka-Gieldoń			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		2	
Auditorium classes		auditorium classes - 15 h	
The realization of activities		tutorial classes – 5 h	
classroom instruction		student's work – 30 h	
Number of hours		Total: 50 h - 2 ECTS	
Auditorium classes: 15 hours			
The academic cycle			
2025/2026 summer semester			
Type of course		Language of instruction	
an elective course		English	
Teaching methods		Form and method of assessment and basic criteria for evaluation or examination requirements	
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.		Final evaluation	
		Graded credit	
		Assessment methods	
		- multimedia presentation, report, test - assignment work – project or presentation - graded course credit based on individual grades obtained during the semester	
		The basic criteria for evaluation	
		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	
Method of verifying required learning outcomes			

Required courses and introductory requirements	
A. Formal requirements lack	
B. Prerequisites lack	
Aims of education Familiarise students with eco-innovative solutions related to various aspects of the functioning of industry, rural areas and cities, and people's everyday lives.	
Course contents 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.	
Bibliography of literature Literature required to pass the course scientific articles indicated by the teachers	
The learning outcomes (for the field of study and specialization) 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	Knowledge 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
	Skills 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;
	Social competence 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.

mechanisms of economic and consumer pressure on the environment and recognises the possibilities of reducing it using the latest knowledge and scientific achievements
K_OŚI_U06 uses available sources of information and understands literature in the field of environmental protection, chemistry and natural sciences
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

Contact

ewa.siedlecka@ug.edu.pl