


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


Course title		ECTS code	
Monographic lecture - Advanced oxidation processes		13.3.1033	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	drugiego stopnia
Wydział Chemii	Biznes chemiczny	form	stacjonarne
		specjalty	wszystkie
		specialization	wszystkie
Teaching staff			
prof. dr hab. inż. Adriana Zaleska-Medynska; dr hab. Dagmara Jacewicz, profesor uczelni			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		3	
Lecture		classes 30 h	
The realization of activities		tutorial classes 10 h	
classroom instruction		student's own work 35 h	
Number of hours		Total: 75 h - 3 ECTS	
Lecture: 30 hours			
The academic cycle			
2023/2024 summer semester			
Type of course		Language of instruction	
obligatory		polish	
Teaching methods		Form and method of assessment and basic criteria for evaluation or examination requirements	
multimedia-based lecture		Final evaluation	
		Graded credit	
		Assessment methods	
		oral course credit	
		The basic criteria for evaluation	
		Positive assessment of oral credit according to criteria in accordance with the University of Gdansk Studies Regulations	
Method of verifying required learning outcomes			
Required courses and introductory requirements			
A. Formal requirements			
none			
B. Prerequisites			
none			
Aims of education			
Aims of education			
-To familiarize students with the mechanisms of degradation of pollutants in selected advanced oxidation processes			
• To familiarize students with the selected devices used for the treatment of liquid and gas streams by AOP			
Course contents			
Course contents			
A. Lecture topics:			
Characterization and classification of advanced oxidation processes (AOP). The mechanism of oxidation of pollutants in the method of wet air			

oxidation and supercritical oxidation. Characteristics of chemical, photochemical and electrochemical processes for removing impurities from water, soil and air. Production and application of modern materials with catalytic properties in AOP methods. Application of nanostructures in AOP methods. The use of ozonation for disinfection, removal of organic compounds from the water phase and for deodorization of air streams.

Bibliography of literature

Bibliography of literature

Literature required to pass the course

A. Literatura wymagana do ostatecznego zaliczenia zajęć (zdania egzaminu):

A.1. wykorzystywana podczas zajęć

1. Barbusiński, Zaawansowane utlenianie ścieków przemysłowych, Politechnika Śląska, 2013r.
2. Burczyk B. Zielona Chemia, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2006
3. Lewandowski W.M. Proekologiczne źródła energii odnawialnej, WNT W-wa 2001
4. Zarzycki R., Zaawansowane metody utleniania, Politechnika Wroclawska, Wrocław 2002.

A.2. studiowana samodzielnie przez studenta

Materials prepared by the teacher

Extracurricular readings

The learning outcomes (for the field of study and specialization)

Knowledge

Skills

Social competence

Contact

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