Sylabusy - Centrum Informatyczne UG



	KAPITAŁ LUDZKI Narodowa strategia spójności	Europejskie	nansowany prz ijską w ramach ego Funduszu ecznego	ez UNIA EUROPEJSKA EUROPEJSKI FUNDUSZ SPOŁECZNY	
Course title			E	CTS code	
Surfactants and biosurfactants			13.3.0422		
Name of unit admini	strating study				
Faculty of Chemistr	γ				
Studies					
faculty	field of study	type	pierwszego stor	onia	
Wydział Chemii	Chemia		form stacjonarne		
			specialty chemia kosmetyków		
		specialization	WSZYSTKIE		
eaching staff					
dr Iwona Dabkowsł	ka; dr hab. Beata Grobelna,	profesor uczelni:	prof. dr hab. ir	iż. Tadeusz Ossowski	
Forms of classes, the realization and number of hours				CTS credits	
Forms of classes				3	
Laboratory classes, Lecture				classes - 45 h	
The realization of activities				tutorial classes – 5 h	
				student's own work – 25 h	
classroom instruction Number of hours					
				Total: 75 h - 3 ECTS	
	Laboratory classes: 30 hour	ΓS			
The academic cycle					
2024/2025 winter s	emester				
Type of course			Language of instruction		
obligatory		F = -	polish		
Teaching methods			Form and method of assessment and basic criteria for eveluation or examination requirements		
 conducting experiments multimedia-based lecture 			Final evaluation		
		Grade	Graded credit		
			Assessment methods		
			- written exam with open questions - written exam (test)		
			- graded course credit based on individual grades obtained during the		
		-	ester	it based on individual grades obtained during the	
			- written test - open test and questions		
			ic criteria for		
			• obtaining 51% of points from the test consisting of 10-15 open questions (50%) and		
		-		covering issues mentioned in the program of the lecture	
lethod of verifying	required learning outcom	•			
	nd introductory requireme				
A. Formal requirement completed a course ir	its n general chemistry, analytical o	chemistry and phys	ical chemistry,		
B. Prerequisites					
	basics of general, inorganic an	d organic chemistry	/		
Aims of education					
 familiarization with the second s	he structure and physical prope	erties of surfactants	and biosurfactan	its,	

- familiarization with the application of industry surfactants and biosurfactants,
- familiarization with adsorption mechanisms and adsorption capacity of surfactants and biosurfactants.
- · Presentation of the influence of the structure of surfactants on surface properties of adsorbents.

Course contents

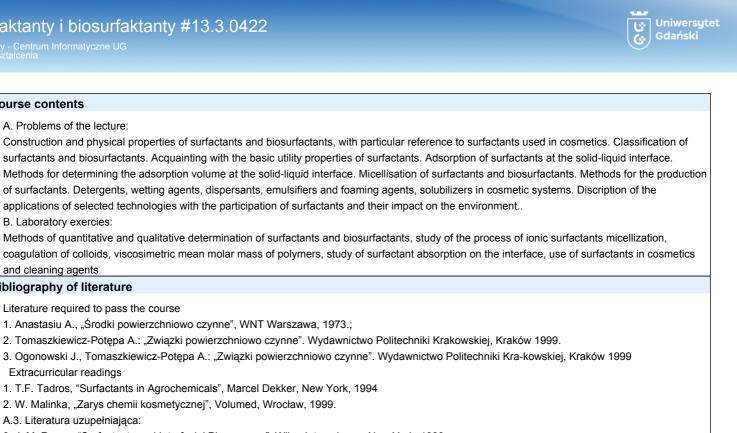
A. Problems of the lecture:

B. Laboratory exercies:

and cleaning agents **Bibliography of literature**

Extracurricular readings

A.3. Literatura uzupełniająca:



3. J. M. Rosen, "Surfactants and Interfacial Phenomena", Wiley-Interscience, New York, 1989

The learning outcomes (for the field of study and	Knowledge		
specialization)	 describes the properties of surfactants and the technology of their production. describes the stages of creating industrial processes and technical preparation o production with the participation of surfactants. lists and describes selected uses of surfactants and their impact on humans and the environment. Explains the concepts of free enthalpy, enthalpy and entropy of adsorption in surfactants. 		
	Skills		
	 Classifies and differentiates surfactants based on their chemical structure. Interprets the phenomena occurring with the participation of surfactants. Predicts the role of surfactants and biosurfactants in cosmetics, medicine, chemical and technological processes. 		
	Social competence		
	 Improves skills in the use of measurement methods and techniques. Effectively communicates in a group and uses the experience of other people. It is guided by the principle of saving materials and resources. The student understands the need for further education, information retrieval in literature and critical interpretation of experiments. 		
Contact	· · · ·		

iwona.dabkowska@ug.edu.pl