


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


Course title		ECTS code	
Diploma lecture - Biological activity and synthesis of glycopeptides and their precursors		13.3.0437	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	pierwszego stopnia
Wydział Chemii	Chemia	form	stacjonarne
		specjalty	chemia biomedyczna, chemia kosmetyków, analityka i diagnostyka chemiczna, chemia żywności
		specialization	wszystkie
Teaching staff			
prof. dr hab. Adam Prahł; dr hab. Janusz Madaj, profesor uczelni			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		2	
Lecture		30 h classes	
The realization of activities		5 h consultation	
classroom instruction		15 h student's own work	
Number of hours		TOTAL: 50 h - 2 ECTS	
Lecture: 30 hours			
The academic cycle			
2024/2025 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	
		Written exam with 8-10 open questions; oral exam (supplementary).	
		The basic criteria for evaluation	
		Positive evaluation of the written exam, consisting of 8-10 open questions covering issues mentioned in the lecture's program; oral exam - extension of the written exam, but only for those students who obtained more than 40% of the points possible to receive from the written exam.	
Method of verifying required learning outcomes			
Required courses and introductory requirements			
A. Formal requirements			
completed subject „Chemia Organiczna”			
B. Prerequisites			
completed subject „Chemia Organiczna”			
Aims of education			
1. Provide students with the basic issues relating to the synthesis of glycopeptide precursors; 2. making students familiar with the basic glycopeptide types; 3. introduce students to the basics methods used in the synthesis of glycopeptides;			

4. knowledge of selected aspects of chemical self-experimentation	
Course contents	
Characterization of amino acids and carbohydrates; preparation of peptides, glycoproteins and simple carbohydrate compounds; methods for purification and identification of biomolecules (chromatography, electrophoresis, IR spectroscopy, UV-VIS, NMR, mass spectrometry), the role and functions of peptides, proteins, carbohydrates and glycoproteins in the body, characterization of selected peptides and carbohydrates.	
Bibliography of literature	
Literature required to pass the course brak	
Extracurricular readings	
A. Wiśniewski, J. Madaj, Podstawy chemii cukrów, Wydawnictwo Agra-Enviro Lab., Poznań-Gdańsk 1997, ISBN 83-904998-2-7	
H.D. Jakubke, H. Jeschkeit, Aminokwasy, peptydy, białka, PWN, Warszawa 1989	
The learning outcomes (for the field of study and specialization)	Knowledge
	<ol style="list-style-type: none"> 1. Evaluates the possibilities of using amino acids and carbohydrates as biologically active compounds; 2. obtains information from the borderline of two types of natural compounds; 3. learns the techniques of separation and analysis of biomolecules; 4. acquires knowledge of basic techniques for the preparation of glycopeptides.
	Skills
	<ol style="list-style-type: none"> 1. Describes basic methods for the glycopeptides and their precursors synthesis by chemical equations; 2. knows laboratory equipment and apparatus and uses them to carry out chemical experiments; 3. verifies and criticizes the self-conducted experiments results; 4. formulates opinions on basic chemical issues (with caution and criticism in their expression).
	Social competence
	<ol style="list-style-type: none"> 1. Understands the need for further education; 2. follows established procedures in laboratory work; 3. is careful in dealing with hazardous chemicals..
Contact	
adam.prahl@ug.edu.pl	