UNIWERSYTET GDAŃSKI

Course title	**ECTS code**
Wykład dyplomowy - Aktywność biologiczna i synteza glikopeptydów i ich prekursorów/Diploma lecture - Biological activity and synthesis of glycopeptides and their precursors	13.3.0437

Name of unit administrating study

Studies

Field of study	Type	Form	
Chemistry	Bachelor	Full-time studies	

Teaching staff
Prof. dr hab. Adam Prahl

Forms of classes, the realization and number of hours

A. Forms of classes, in accordance with the UG Rector's regulations
Lecture

B. The realization of activities
Classes in the didactic room

C. Number of hours
30 h lecture

ECTS credits

30 h classes
5 h consultation
15 h student's own work
TOTAL: 50 h - 2 ECTS

The academic cycle
Third year, summer semester

Type of course
optional subject

Language of instruction
Polish

Teaching methods

lecture with multimedia presentation

Form and method of assessment and basic criteria for evaluation or examination requirements

A. Final evaluation, in accordance with the UG study regulations
Course completion (with a grade)

B. 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.

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

A. Literature required to pass the course brak

B. 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

Knowledge

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

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

1. Understands the need for further education;
2. follows established procedures in laboratory work;
3. is careful in dealing with hazardous chemicals..