


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


| | | | |
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| 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; | | | |

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| 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 | |
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