KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Basic Biochemistry	13.1.1450

Name of unit administrating study

null

Studies

faculty	field of study		
Faculty of Biology	Medical Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Genetics and Experimental Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Natural Resources Conservation	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all

Teaching staff

prof. UG, dr hab. Joanna Skórko-Glonek; dr hab. Ewa Laskowska, profesor uczelni; dr hab. Wojciech Pokora, profesor uczelni

Forms of classes, the realization and number of hours

Forms of classes

Lecture

The realization of activities

classroom instruction, online classes

Number of hours

Lecture: 15 hours

ECTS credits

2
Working in contact with the teacher:
Participation in lectures - 15 hours
Consultations - 5 hours
The unassisted student work (studying the literature, preparing for tests): 10 hours

TOTAL: 30 hours

The academic cycle

2022/2023 summer semester

Type of course

an elective course

Language of instruction

english

Teaching methods

- Presentation, problem-solving tasks, discussion.
- discussion
- multimedia-based lecture

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

Final evaluation

Examination

Assessment methods

Test, multiple-choice and open-ended questions

The basic criteria for evaluation

	Students are expected to attend all lectures. The exam will cover information presented during lectures and supplementary materials indicated by the teachers. The grade will be based on the following scale: below 51% - 2 51-60% -3 61-70% - 3.5 71-80% - 4 81-90% -4,5 91-100% - 5

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

B. Prerequisites

Basic knowledge of inorganic and organic chemistry

Aims of education

The overall goal of this course is to gain a basic knowledge of the structure and function of macromolecules (proteins, nucleic acids, carbohydrates, lipids) and main biochemical processes.

Course contents

Structure of proteins, nucleic acids, carbohydrates and lipids. Function of selected proteins. Enzymes-kinetics, catalytic and regulatory strategies. Main metabolic pathways: glycolysis and gluconeogenesis, citric acid cycle, oxidative phosphorylation, pentose phosphate pathway, lipid metabolism. Regulation and integration of metabolic pathways.

Bibliography of literature

A. Literatura wymagana do ostatecznego zaliczenia zajęć (zdania egzaminu):
A.1. wykorzystywana podczas zajęć
Biochemistry : a short course / John L. Tymoczko, Jeremy M. Berg, Lubert Stryer.
New York : W. H. Freeman and Company, cop. 2010.
Biochemistry / Jeremy M. Berg, John L. Tymoczko, Gregory J. Gatto, Jr., Lubert Stryer.
New York : W. H. Freeman & Company, cop. 2015.
A.2. studiowana samodzielnie przez studenta
Biochemistry : a short course / John L. Tymoczko, Jeremy M. Berg, Lubert Stryer.
New York : W. H. Freeman and Company, cop. 2010.
Biochemistry / Jeremy M. Berg, John L. Tymoczko, Gregory J. Gatto, Jr., Lubert Stryer.
New York : W. H. Freeman & Company, cop. 2015.

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

Knowledge

- describes the structure and properties of basic types of biological macromolecules and molecular mechanisms and regulation of the basic metabolism pathways

Skills

learns independently, in a targeted manner, can use biochemical terms in a way that is comprehensible and accessible for specialists, as well as people outside the group of specialists

Social competence

knows the limits of their own knowledge and understands the need for constant learning and development, and is open to new ideas

Contact

joanna.skorko-glonek@ug.edu.pl