



48SJ-BIOCH12
ECTS: 2.00
CYCLE: 2022L

Course syllabus - part A Biochemistry 1/2

SUBJECT MATTER CONTENT

TEACHING OBJECTIVE

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

M/NMA_P7S_KR+++ , M/NMA_P7S_WG+++ ,
M/NMA_P7S_UW+++ , M/NM+++ ,
M/NMA_P7S_KO+++

Symbols for outcomes related to the field of study:

M/NM_B.W17.+ , M/NM_K.6.++ , M/NM_C.W51.+ ,
B.U9.+ , M/NM_B.W13.++ , M/NM_B.W15.+ ,
M/NM_K.9.+ , M/NM_A.W4.++ , M/NM_B.W10.++
+ , M/NM_B.W12.+++ , B.U13.++ , KA7_KR2+ , M/
NM_B.W14.++ , B.U10.+ , B.U8.+ ,
M/NM_C.W49.+ , K.5.+ , M/NM_C.W47.+ ,
D.U17.+ , M/NM_B.W2.+ , B.U11.+

LEARNING OUTCOMES:

Knowledge:

W1 - knows the structure, properties, and functions of basic ingredients of a cell (proteins and nucleic acids)

W2 - knows catalytic strategies of a cell and differences in actions of various types of enzymatic co-factors as well as applications of enzymes and regulators of their activity in medicine

W3 - knows the principles of storage and expression of genetic information

W4 - knows and describes major sources of reactive oxygen species, mechanisms of protection against free radicals, and the effects of their action in the cell and in the body

W5 - knows and describes the structure and composition of the cell membrane, its transport functions and functions related to the transduction of the biological signals

W6 - knows and explains the acid-base balance mechanisms in the body in physiological and pathological conditions

Skills:

U1 - applies the techniques and instruments used in quantitative and qualitative analyses in the laboratory

U2 - analyses and interprets the results of biochemical examinations as well as prepares a final protocol for the conducted experiments

U3 - uses the most recent scientific literature and prepares a multimedia presentation on an assigned topic in an understandable way

Social competence:

K1 - to update one's knowledge constantly and to improve professional

Legal acts specifying learning outcomes:
672/2020

Disciplines: medical sciences

Status of the

course:Obligatoryjny

Group of courses:A -

przedmioty podstawowe

Code: ISCED 0912

Field of study:Medicine

Scope of education:

Profile of education:

General academic

Form of studies: full-time

Level of studies: uniform

master's studies

Year/semester: 1/2

Types of classes: Lecture,
Seminar, Classes

Number of hours in semester:Lecture: 10.00,
Seminar: 15.00, Classes:
15.00

Language of instruction:

Introductory subject:

Prerequisites:

Name of the organisational unit conducting the course:Katedra Biochemii

Person responsible for the

realization of the course:dr

Edyta Sienkiewicz-Szlapka

e-mail:

edyta.sienkiewicz@uwm.edu.p

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Additional remarks:

skills

K2 – cooperates and works in a group assuming various roles in it

K3 – completes tasks in a safe way; obeys the rules of occupational safety and health in the laboratory

K4 – presents a favorable attitude towards the promotion of a pro-healthy lifestyle

TEACHING FORMS AND METHODS:

Lecture(W1;W2;W3;K1;K4;):Conversational lecture with the use of multimedia

Seminar(W1;W2;W3;W4;W5;W6;U3;K1;K2;K4;):Presenting a speech on an assigned subject, multimedia presentation, discussion, case study, debate,

Classes(W1;W2;U1;U2;K1;K2;K3;K4;):practical laboratory exercises

FORM AND CONDITIONS OF VERIFYING LEARNING

OUTCOMES:

Seminar: Written test - written checking of knowledge in the field of problems assigned to the lab classes (short test with 6 questions; questions: closed type with one or more correct answers (BOFs/MCQs), true-false, matching the right answer or open-question type with a short answer (W1;W2;W3;W4;W5;U1;U2;);

Seminar: Presentation - an oral presentation of the selected problem (with multimedia support) (W1;W4;W5;W6;U3;K2;);

Seminar: Part in the discussion - being active in discussions (W1;W2;W3;W4;W5;W6;K1;K2;K3;K4;);

Lecture: Colloquium test - Unit tests checking the knowledge of problems discussed on the lectures; each about 40 questions; questions: closed type with one or more correct answers (BOFs/MCQs), true-false, matching the right answer or open-question type with a short answer (W1;W2;W3;);

Classes: Written test - written checking of knowledge in the field of problems assigned to the lab classes (short test with 5 questions; questions: closed type with one or more correct answers (BOFs/MCQs), true-false, matching the right answer or open-question type with a short answer (W1;W2;W3;W4;W5;U1;U2;);

Classes: Report - performing analyses and preparing laboratory report (U1;U2;U3;K3;);

BASIC LITERATURE:

1. Harvey Richard and Ferrier Denise, *Lippincott's Illustrated Reviews: Biochemistry*, Tom 1, Wyd. Wolters Kluwer | Lippincott Williams Wilkins, R. 2017, s. 551

2. Lieberman Michael, Marks Allan D., *Marks' Basic Medical Biochemistry: A Clinical Approach*, Tom 1, Wyd. Wolters Kluwer | Lippincott Williams Wilkins, R. 2018, s. 1000

SUPPLEMENTARY LITERATURE:

1. Murray Robert K., Bender David A., Botham Kathleen M., Kennelly Peter J., Rodwell Victor W., Weil P., *Harper's Illustrated Biochemistry*, Tom 1, Wyd. The McGraw-Hill Companies, R. 2018, s. 800

2. Salway J.G., *Medical Biochemistry at a glance*, Tom 1, Wyd. Wiley-Blackwell, R. 2012, s. 169

Detailed description of ECTS credits awarded - part B

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The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	10.0 h
- participation in: Seminar	15.0 h
- participation in: Classes	15.0 h
- consultation	2.0
	Total: 42.0 h.

2. Independent work of a student:

Preparation for colloquiums and written tests	4.00 h
preparation for practical classes (lab classes and seminars)	4.00 h

Total: 8.0 h

contact hours + independent work of a student Total: 50.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 50.0 h : 25.0 h/ECTS = 2.00 ECTS on average: 2.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: