



Course syllabus - part A Histology with Cytophysiology and Embryology 1/2

48SJ-HCEI
ECTS: 0.08
CYCLE: 2022Z

SUBJECT MATTER CONTENT

TEACHING OBJECTIVE

The main objective of the course is to provide students with knowledge about the structure and related functions of cells, tissues, organs and systems forming the body of an adult, and in the earliest stages of development. The fundamental assumption was that getting to know microarchitectonics and histophysiology of organs is a necessary introduction to teaching other disciplines in further years of study. The basic part of the course program is the recognition of cytological and histological slides during practical classes.

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/NM+++

Symbols for outcomes related to the field of study:

A.U5.+ , A.W6.+ , A.W4.+ , A.U1.+ , A.U2.+ , K.5.+ , B.W18.+ , K.7.+ , A.W5.+ , A.W1.+ , B.W17.+

LEARNING OUTCOMES:

Knowledge:

W1 - In terms of knowledge, the graduate knows and understands anatomic, histological, and embryological nomenclature in the Polish and English languages

W2 - In terms of knowledge, the graduate knows and understands: the basic cell structures and their functional specialisations

W3 - In terms of knowledge, the graduate knows and understands the microarchitecture of tissues, extracellular matrix, and organs

W4 - In terms of knowledge, the graduate knows and understands the stages in the development of the human embryo, the composition and functions of the foetal membranes and the placenta, the stages in the development of individual organs, and the impact of harmful factors on the development of the embryo and foetus (teratogenic)

W5 - In terms of knowledge, the graduate knows and understands the methods of intercellular communication and of the communication between the cell and the extracellular matrix, and the signal transduction pathways in cells, plus examples of disturbances in the processes leading to the growth of neoplasms and other diseases

W6 - In terms of knowledge, the graduate knows and understands the following processes: the cell cycle, proliferation, cell differentiation and ageing, apoptosis and necrosis, and their impact on the functioning of

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: 1/1

Types of classes: Classes, Lecture

Number of hours in semester:

Language of

instruction:English

Introductory subject:

Prerequisites: Basic

knowledge of human anatomy, embryology, physiology and cell biology

Name of the organisational unit conducting the course:Katedra Histologii i Embriologii Człowieka

Person responsible for the realization of the course:prof. dr hab. n. med. Zbigniew Kmieć, dr hab. n. med. Janusz Godlewski, prof. UWM

e-mail: janusz350@poczta.onet.pl, zbigniew.kmiec@uwm.edu.pl

Additional remarks:

the organism

Skills:

U1 - In terms of skills, the graduate can operate an optical microscope, including the use of immersion

U2 - In terms of skills, the graduate can: recognise the histological structures corresponding to organs, tissues, cells, and cell structures in the images of the optical or electronic microscope, describe and interpret their structure and the relationships between their composition and function

U3 - In terms of skills, the graduate can use the anatomic, histological, and embryological nomenclature in speech and writing

Social competence:

K1 - In terms of social skills, the graduate is prepared to perceive and recognise own limitations, and assess his/her deficits and educational needs

K2 - In terms of social skills, the graduate is prepared to use objective sources of information

TEACHING FORMS AND METHODS:

Classes(W1;W2;W3;W4;W5;W6;U1;U2;U3;K1;K2;):Multimedia presentations (PowerPoint presentations) preceding the practical part. Microscopic analysis of histological slides. The teaching process is supported by tablets and remote education systems based on MS Teams platform (lectures, communication), Moodle (teaching materials, practical tasks, practical tests and colloquia) and CaseCenter (virtual digital microscopy). Students identify histological structures on slides using light microscopy and/or using virtual digital microscopy.

Lecture(W1;W2;W3;W5;U2;U3;K1;K2;):Multimedia presentation (PowerPoint presentation) using remote learning platforms (MOODLE, MS TEAMS).

FORM AND CONDITIONS OF VERIFYING LEARNING

OUTCOMES:

Lecture: Colloquium test - Two theoretical colloquia : 40 test questions - one-choice test and 5 questions on the presented diagrams/figures; Time: 60 minutes. Results are evaluated according to the percentage system of correct answers (0-100%). At the end of the winter semester, a weighted average of all colloquia is calculated, where 65% of the weight is the arithmetic average of the theoretical colloquia and 35% of the weight is the result of the practical colloquium. The weighted average of the colloquia should be not less than 60%. (W1;W2;W3;W4;W5;W6;U2;U3;K1;K2;);

Lecture: Colloquium practical - One practical colloquium - recognition of 10 histological structures. Time: 10 minutes. Results are evaluated according to the percentage system of correct answers (0-100%). At the end of the winter semester, a weighted average of all colloquia is calculated, where 65% of the weight is the arithmetic average of the theoretical colloquia and 35% of the weight is the result of the practical colloquium. The weighted average of the colloquia should be not less than 60%. (W1;W2;W3;U1;U2;U3;K1;);

Classes: Written test - A short test on the topic at the beginning of class: one-choice test plus a question on the figure. In total: 8 questions, time: 8 minutes, 1 point each for a correct answer. Results are evaluated according to the percentage system of correct answers (0-100%). To pass the winter semester : a minimum of 60% of the points obtained for the classes (short tests + practical tasks/presentations) (W1;W2;W3;W4;W5;W6;U2;U3;K1;K2;);

Classes: Presentation - In the case of practical classes using a microscope, the student shall perform a practical task (presentation). The completed task should be submitted via Moodle system within 48 hours from the end of the class. The practical task is graded on a scale from 0 to 4 (4 points for a faultless task). The grade cannot be

corrected. If the task is not submitted or is submitted after the deadline, the mark is 0 (zero) points. To pass the winter semester : a minimum of 60% of the points obtained for the classes (short tests + practical tasks/ presentations). (W1;W2;W3;U1;U2;U3;K1;);

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Classes: Colloquium practical - One practical colloquium - recognition of 10 histological structures. Time: 10 minutes. Results are evaluated according to the percentage system of correct answers (0-100%). At the end of the winter semester, a weighted average of all colloquia is calculated, where 65% of the weight is the arithmetic average of the theoretical colloquia and 35% of the weight is the result of the practical colloquium. The weighted average of the colloquia should be not less than 60%. (W1;W2;W3;U1;U2;U3;K1;);

BASIC LITERATURE:

1. A. L. Mescher, *Junqueira's Basic Histology: Text and Atlas, 15th Edition*, Wyd. McGraw-Hill Lange, R. 2018, s.
2. T.W. Sadler, *Langman's Medical Embryology, 13th edition*, Wyd. Wolters Kluwer, R. 2015, s.

SUPPLEMENTARY LITERATURE:

1. B. Alberts, A. Johnson, J. Lewis, M. Raff, K. Roberts, P. Walter, *Molecular Biology of the Cell, 5th edition*, Wyd. Garland Science, R. 2018, s.
2. L.P. Gartner, *Textbook of Histology, 4th edition*, Wyd. Elsevier, R. 2016, s.
3. W. Kuehnel, *Color Atlas of Cytology, Histology, and Microscopic Anatomy, 4th edition*, Wyd. Thieme, R. 2003, s.
4. N. Chandar, S. Viselli, *Cell and Molecular Biology*, Wyd. Wolters Kluwer, R. 2018, s.
5. A. L. Kierszenbaum, L. Tres, *Histology and Cell Biology, 5th edition*, Wyd. Elsevier, R. 2020, s.
6. B. M. Carlson, *Human Embryology and Developmental Biology, 6th edition*, Wyd. Elsevier, R. 2019, s.

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: Classes	None h
- participation in: Lecture	None h
- consultation	2.0
	Total: 2.0 h.

2. Independent work of a student:

Total: 0 h

contact hours + independent work of a student Total: 2.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 2.0 h : 25.0 h/ECTS = 0.08 ECTS on average: 5.0 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: