



Syllabus for academic year:2020/2021.....														
Training cycle:2019-2024.....														
Description of the course														
Module/Course	Histology with Embryology										Group of detailed education results			
											Group code	Group name		
											A	Morphological Science		
											B	Scientific basis of medicine		
Faculty	Dentistry													
Major	Dentistry													
Unit realizing the subject	Histology and Embryology Division													
Specialties														
Level of studies	Uniform magister studies X* 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	<input type="checkbox"/> full-time <input checked="" type="checkbox"/> part-time													
Year of studies	II						Semester	X Winter Summer						
Type of course	X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / elective													
Course	x major <input type="checkbox"/> basic													
Language of instruction	<input type="checkbox"/> Polish <input checked="" type="checkbox"/> English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
Number of hours														
Form of education														
Unit teaching the course	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
	Winter Semester													



Direct (contact) education				18										
Online learning (synchronous)	5													
Distance learning (asynchronous)				17										
Summer Semester														
Direct (contact) education														
Online learning (synchronous)														
Online learning (asynchronous)														
TOTAL per year:														
Direct (contact) education				18										
Online learning (synchronous)	5													
Online learning (asynchronous)				17										
<p>Educational objectives (max. 6 items)</p> <p>C1. During the course of histology students should become acquaint:</p> <ul style="list-style-type: none"> • the principles of the basic techniques used in the morphological studies, • the organization of the cell model with cell organelles, their structure and functions, • structure and function of selected, important specialized cells, • classification, characteristics, origin, histological organization and role of the tissues, • histological organization of organs and systems and their role and the basic mechanisms that regulate their functions. <p>C2. During the cytophysiology classes, students should become acquaint with:</p> <ul style="list-style-type: none"> • processes taking place in cell organelles and mechanisms of their regulation, • life cycle, cell differentiation, regulation of these processes and cell aging, • types of cell death (apoptosis, necrosis, autophagy, mitotic catastrophe) • intercellular interactions and their importance, • more important processes related to with immune response, neoplasm and cell adhesion • selected cytoplasmic processes 														
Education result matrix for module/course in relation to verification methods of the intended education result and the type of class														
Number of course education result	Number of major education result	Student who completes the module/course knows/is able to			Methods of verification of intended education results (forming and summarising)			Form of didactic class <i>**enter the abbreviation</i>						
W 01	AW1	demonstrates the knowledge of human organism's structures: cells, tissues, organs and systems, especially stomatognathic system			Oral response, written examination			L, MC						



W 02	AW4	describes the organs' and the whole organism's development, especially the masticatory complex development	Oral response Written response Final test	L, MC
W 03	AW5	describes concisely the functional significance of the particular organs and systems	Participation in the discussion of problem	L, MC
U 01	A. U2	The student recognizes in images from optical or electron microscope histological structures corresponding to the organs, tissues, cells and cellular structures, shall describe and interpret their structure and the relationship between structure and function	Oral response, written examination, proper drawing preparation, practical examination	MC
K 01	K01	understands the need for learning throughout life	direct observation of student attitudes	L, MC
K02	K02	able to work in a group assuming different roles in it	direct observation of student attitudes	L, MC
K03	K03	can properly prioritize the implementation of tasks specified by him or others	direct observation of student attitudes	L, MC

** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .

Please mark on scale 1-5 how the above effects place your classes in the following categories:
communication of knowledge, skills or forming attitudes:

Knowledge:5

Skills:4

Social competences:3.

Student's amount of work (balance of ECTS points)

Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	40
2. Online learning hours (e-learning):	80
3. Student's own work (self-study):	100
Total student's workload	120
ECTS points for module/course	4
Comments	



<p>Content of classes (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)</p>
<p>Lectures :</p> <ol style="list-style-type: none">1. Digestive system: liver and pancreas2. Respiratory system.3. Skin4. Urinary system and reproductive system5. Endocrine system
<p>Seminars -</p>
<p>Practical classes</p> <p>Histology:</p> <p>Content of classes (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)</p> <ol style="list-style-type: none">1. Digestive system: liver and pancreas.2. Endocrine system (hypothalamus, pituitary gland, thyroid and parathyroid, adrenals, pancreas, ovary and testis, diffused neuroendocrine system).3. Respiratory system: upper and distal tract.4. Urinary system (kidney, the structure and function of nephron, lower urinary tract).5. Male and female reproductive system (ovary and uterus, testis and epididymis, hormonal control).6. Skin and breast.7. Sense organs: eye and ear. <p>Cytology:</p> <ol style="list-style-type: none">1. Methods used to study the cell functioning.2. Cell nucleus' organization and functioning.3. Cell cycle and cell aging.4. Types of cell death (apoptosis, necrosis, autophagy).5. Cytoskeleton.6. The most important processes occurring in cytoplasm.7. Intercellular signaling.8. Adhesion molecules and extracellular matrix.9. The most important processes associated with immune response.10. Cancerogenesis.
<p>Other -</p> <ol style="list-style-type: none">1.2.3. <p>etc. ...</p>



Basic literature (list according to importance, no more than 3 items)

1. Basic Histology. L. Carlos Junqueira, Jose Carneiro, Robert O. Kelly
2. Human Histology. Alan Stevens, James Lowe
3. Langman's Medical Embriology. T.W. Sadler; Lippincott Williams & Wilkins

Additional literature and other materials

1. Histology and Cell Biology: An Introduction to Pathology. Abraham Kierszenbaum
2. Histology: a text and atlas. Michael H. Ross, Gordon I. Kaye, Wojciech Pawlina
3. Exercise notebook for medicine and dentistry student (ed. Maciej Zabel). Elsevier Urban & Partner, Wrocław 2010

Didactic resources requirements (e.g. laboratory, multimedia projector, other...)

Exercise room, optical microscopes, optical microscope with camera and monitor, laptop, multimedia projector, boards, histological preparations

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)

Conditions to receive credit for the course (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)

Conditions to receive credit for the course:

1. Test of practical skills: 10 slides from general histology, 5 slides from detailed histology with pointed elements, 2 electronograms. To pass correctly have to be distinguished at least 7 slides from general histology, 3 from detailed histology and 1 electronogram.
2. Cytophysiology test, written, 50 questions multiple choice. For credit 26 correct answers is required.
3. Final exam in form of written multiple choice test up to 120 questions.

The condition for admission to the final examination of the theoretical: completion of the second semester

Grade:	Criteria (only for courses/modules ending with an examination)
Very Good (5.0)	-
Good Plus (4.5)	-
Good (4.0)	-



Satisfactory Plus (3.5)	-
Satisfactory (3.0)	-
	Criteria (only for courses/modules ending with e credit)
Credit	<ul style="list-style-type: none"> • Test of practical skills • Cytophysiology test

Grade:	Criteria (examination evaluation criteria)
Very Good (5.0)	Point range depending on Gauss classification
Good Plus (4.5)	Point range depending on Gauss classification
Good (4.0)	Point range depending on Gauss classification
Satisfactory Plus (3.5)	Point range depending on Gauss classification
Satisfactory (3.0)	Point range depending on Gauss classification. Minimum 60% correct answers
Unit realizing the subject	Division of Histology and Embryology Wrocław Medical University
Unit address	ul. Chalubinskiego 6a, 50-368 Wrocław
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Person responsible for module	Marzenna Podhorska-Okolow MD, PhD, Prof.
Coordinator	Marzenna Podhorska-Okolow MD, PhD, Prof.
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List of persons conducting specific classes				
Full name	Degree/scientific or	Discipline	Performed profession	Form of classes



	professional title			
Urszula Ciesielska	PhD	Medical science	adiunct	lectures, classes
Christopher Kobierzycki	MD, PhD	Medical science	adiunct	lectures, classes

Date of Syllabus development

23. 09. 2020

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Syllabus developed by

.....Urszula Ciesielska.....

Signature of Head of teaching unit

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Signature of Faculty Dean

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