



# Pomeranian Medical University in Szczecin

## SYLLABUS of the MODULE ( SUBJECT)

### General Information

<b>Module title: Histology, Embryology and Cytology (2025/2026)</b>	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Dentistry
Level of study	long-cycle Master's degree studies
Mode of study	full-time studies provided in English Language
Year of studies, semester	Year 1, semester I and II
ECTS credits (incl. semester breakdown)	<b>8 (3/5)</b>
Type/s of training	Lectures: 16h e-learning (I semester: 8h, II semester: 8h) Seminars: 6h (I semester: 3h, II semester: 3h) Practical: 50h (I 25 semester: h, II semester: 25h) <b>Summary 74 hours</b>
Form of assessment <sup>1</sup>	<input checked="" type="checkbox"/> final examination: I term, I and II re-take <input checked="" type="checkbox"/> theoretical test <input checked="" type="checkbox"/> practical
Head of the Department/ Clinic, Unit	Assoc. Prof. Aleksandra Wilk, PhD
Tutor responsible for the module	Dagmara Szypulska-Koziarska, PhD Dsc dagmara.szypulska.koziarska@pum.edu.pl Phone no. 914661681
Department's/ Clinic's/ Unit's website	Department of Histology and Embryology 70-111 Szczecin Al. Powstańców Wilkp. 72 tel. + 48 91 466 16 77 <a href="https://www.pum.edu.pl/wydzialy/wydzial-lekarski/katedra-i-zaklad-histologii-i-embriologii">https://www.pum.edu.pl/wydzialy/wydzial-lekarski/katedra-i-zaklad-histologii-i-embriologii</a>
Language	English

## Detailed information

<b>Module objectives:</b>		<b>Histology</b> is one of the basic fields of medicine. The area of interest is the microscopic of the human body that can be studied using the optical devices including all kinds of microscopy. The purpose of the teaching of <b>histology and cytology</b> is to provide a knowledge on the structure and function of cells, structural organization of tissues, entire systems and particular organs in the human body. The knowledge would be necessary for the farther study of the next subjects including physiology, biochemistry, immunology, pathophysiology and pathology. The understanding of ultrastructure of various cell types and molecular mechanisms in their organelle would be helpful to understand the etiology of diseases as well as cellular and sub-cellular mechanisms of medications and toxic agents. Moreover, learning the <b>histology and cytology</b> facilitates to understand relationships between the basic science in medicine and clinical subjects. The aim of the human <b>embryology</b> course is to describe and explain complex processes that occur during human embryo and fetus development. Additionally, basic embryological development of the face, neck, oral cavity, teeth and pharynx as well as of the most common orofacial birth defects.
Prerequisite /essential requirements	Knowledge	Acquire the essential elements of the organization of human tissues. The morphology and function of particular tissues and organs. The human embryo and fetal development, development of the crucial organs, including anomalies.
	Skills	Handling of light microscope with immersion
	Competences	The ability of self-education and group work

Description of the learning outcomes for the subject /module			
No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	demonstrates knowledge of human body structures: cells, tissues and systems with particular regard to stomatognathic system	A.W1.	W, S, K, O, PS EPR, ET – I term and I and II re-take
W02	explains development of organs and entire body with particular regard to masticatory system	A.W2.	W, S, K, O, PS EPR, ET – I term and I II re-take
W03	understands role of nervous system for functions of certain organs	A.W4.	W, S, K, O, PS EPR, ET – I term and I II re-take
W04	knows and understands functional importance of certain organs and systems in synthetic manner	A.W5.	W, S, K, O, PS EPR, ET – I term and I and II re-take
U01	can use an optical microscope and recognize histological structure of tissues and organs under the microscope and perform a description and interpretation of the microscope structure of cells, tissues and organs as well as functions	A.U2.	S, O, PS, EPR
K01	is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs	K5	O
K02	is ready to use reliable sources of information	K7	O

No. of learning outcome	Learning outcomes						
		Seminar	Practical classes	Clinical classes	Simulations	E-learning	Other...
W01	A.W1.	x			x		
W02	A.W2.	x			x		
W03	A.W4.	x			x		
W04	A.W.5.	x			x		
U01	A.U2.		x				
K01	K5		x				
K02	K7		x				

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
<b>Winter semester</b>			
<b>Lectures (8h)</b>			
TK01	Epithelial tissue and exocrine glands.	1	A.W1., A.W2., A.W4., A.W5.
TK02	Connective tissue proper and adipose tissue.	1	A.W1., A.W2., A.W4., A.W5.
TK03	Cartilage and bone with histogenesis.	1	A.W1., A.W2., A.W4., A.W5.
TK04	Blood and bone marrow.	1	A.W1., A.W4., A.W5.
TK05	Nervous tissue.	1	A.W1., A.W4., A.W5.
TK06	Muscle tissue.	1	A.W1., A.W4., A.W5.
TK07	Central nervous system.	1	A.W1., A.W4., A.W5.
TK08	Eye.	1	A.W1., A.W4., A.W5.
<b>Seminars (3h)</b>			
TK01	Cytology.	1	A.W1.
TK02	Methods in histology.	1	A.W1.
TK03	Cell cycle.	1	A.W1.
<b>Practical classes (25h)</b>			
TK 01	Organizing classes (familiarizing Students with the digital system and optical microscope). Epithelial tissue and exocrine glands.	1	A.U2., K5., K7.
TK 02	Connective tissue proper and adipose tissue.	1	A.U2., K5., K7.
TK 03	Cartilage and bone with histogenesis.	1	A.U2., K5., K7.
TK 04	Blood and bone marrow.	2	A.U2., K5., K7.
TK 05	Practical classes-revision of the slides.	2	A.U2., K5., K7.
TK 06	1 <sup>st</sup> theoretical test, 1 <sup>st</sup> practical test.	2	A.U2., K5., K7.
TK 07	1 <sup>st</sup> theoretical and 1 <sup>st</sup> practical test for Students with a doctor's leave.	2	A.U2., K5., K7.
TK 08	Nervous tissue.	2	A.U2., K5., K7.
TK 9	Muscle tissue.	2	A.U2., K5., K7.
TK 10	Central nervous system.	2	A.U2., K5., K7.
TK 11	Eye.	2	A.U2., K5., K7.

TK 12	Practical classes-revision of the slides.	2	A.U2., K5., K7.
TK 13	2 <sup>nd</sup> theoretical test, 2 <sup>nd</sup> practical test.	2	A.U2., K5., K7.
TK14	2 <sup>nd</sup> theoretical test and practical test for Students with doctors' leaves.	2	A.U2., K5., K7.
<b>Summer semester</b>			
<b>Lectures (8h)</b>			
TK01	The circulatory system	1	A.W1., A.W4., A.W5.
TK02	Respiratory system.	1	A.W1., A.W4., A.W5.
TK03	Lymphatic system.	1	A.W1., A.W4., A.W5.
TK04	Skin.	1	A.W1., A.W2., A.W4., A.W5.
TK05	Oral cavity: tongue, lip.	1	A.W1., A.W4., A.W5.
TK06	Tooth.	1	A.W1., A.W4., A.W5.
TK07	Glands associated with the digestive system.	1	A.W1., A.W4., A.W5.
TK08	Endocrine system	1	A.W1., A.W4., A.W5.
<b>Seminars (3h)</b>			
TK01	Teratogenes.	1	A.W1., A.W2., A.W4., A.W5.
TK02	Development of pharyngeal arches and pouches (development of head and neck).	1	A.W1., A.W2., A.W4., A.W5.
TK03	Tooth development.	1	A.W1., A.W2., A.W5.
<b>Practical classes (25h)</b>			
TK01	The circulatory system.	1	A.U2., K5., K7.
TK02	Respiratory system.	1	A.U2., K5., K7.
TK03	Lymphatic system.	1	A.U2., K5., K7.
TK04	Skin. Practical classes-revision of the slides.	2	A.U2., K5., K7.
TK05	3 <sup>rd</sup> theoretical test and 3 <sup>rd</sup> practical test.	2	A.U2., K5., K7.
TK06	3 <sup>rd</sup> theoretical and 3 <sup>rd</sup> practical test for Students with a doctor's leave. Oral cavity: lip and tongue.	2	A.U2., K5., K7.
TK07	Tooth.	2	A.U2., K5., K7.
TK08	Glands associated with the digestive system.	2	A.U2., K5., K7.
TK09	Endocrine system. Practical classes-revision of the slides.	2	A.U2., K5., K7.
TK10	4 <sup>th</sup> theoretical test, 4 <sup>th</sup> practical test.	2	A.U2., K5., K7.
TK11	4 <sup>th</sup> Theoretical and practical test for Students with doctors' leave. Booster.	2	A.U2., K5., K7.
TK12	Practical classes-revision of the slides before the exam.	2	A.U2., K5., K7.
TK13	Theoretical exam.	2	A.U2., K5., K7.
TK14	Practical exam.	2	A.U2., K5., K7.

**Booklist**

## Obligatory literature:

1. Junqueira's Basic Histology: Text and Atlas, Fifteenth Edition.
2. Before we are born. Essential of Embryology and Birth Defects. Keith L. Moore, T.V.N. Persaud, MarkG. Torchia, 8th edition, 2013.
3. Materials prepared by tutors.

## Supplementary literature:

1. B. Wiszniewska, A. Wilk. The world of Histology. Script.
2. Leslie P. Gartner, Textbook of Histology.
3. T.W. Sadler: Langman's medical embryology. Thirteenth edition

<b>Student's workload</b>	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	72
Time spent on preparation to seminars/ practical classess	30
Time spent on reading recommended literature	24
Time spent on writing report/making project	-
Time spent on preparing to colloquium/ entry test	35
Time spent on preparing to exam	75
Other .....	-
Student's workload in total	236
<b>ECTS credits for the subject (in total)</b>	<b>8</b>
<b>Remarks</b>	
-	

\* Selected examples of methods of assessment: EP – written examination  
 EU –oral examination  
 ET – test examination  
 EPR – practical examination  
 K – colloquium  
 R – report  
 S – practical skills assessment  
 RZĆ – practical classes report, incl. discussion on results  
 O –student's active participation and attitude assessment  
 SL –lab report  
 SP – case study  
 PS - assessment of student's ability to work independently  
 W – entry test  
 PM – multimedial presentation other...