



Pomeranian Medical University in Szczecin

SYLLABUS of the MODULE(SUBJECT) 2023/2024 General Information

Module title: The influence of hormonal imbalance on human health	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Medicine
Level of study	long-cycle Master's degree studies
Mode of study	full-time studies provided in English Language
Year of studies, semester	Year I, semester I and II
ECTS credits (incl. semester breakdown)	1 (0,5+0,5)
Type/s of training	(15 h): Lectures (15); I semester, 8 lectures: 6+2 e-learnings; II semester, lectures: 5+2 e-learnings
Form of assessment*	- graded assessment
Head of the Department/ Clinic, Unit	Barbara Wiszniewska Professor PhD, Dsc barbara.wiszniewska@pum.edu.pl
Tutor responsible for the module	Sylwia Rzeszotek PhD sylwia.rzeszotek@pum.edu.pl 91 466 16 25
Department's/ Clinic's/ Unit's website	https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/katedra_i_zakad_histologii_i_embriologii/
Language	English

* replace into where applicable

Detailed information

Module objectives		The primary goal of teaching cytophysiology is to integrate knowledge from a range of basic disciplines with clinical science. It is important to indicate the connection of issues in the field of cell biology with practical problems of medicine. Knowledge of the ultrastructure of individual organelles cellular, molecular mechanisms taking place in their area, regulation of processes metabolic processes taking place in a normal cell will facilitate the understanding of the etiopathogenesis of many diseases. Many of them are based on disorders in the molecular structure of individual organelles, which result in abnormalities in the functioning of cells, tissues, organs and the system of entire organisms. Learning cytophysiology will also provide students with a basis for understanding the cellular and subcellular mechanisms of action of drugs and toxic substances.
Prerequisite /essential requirements	Knowledge	Basic knowledge of cell structure and function.
	Skills	---
	Competences	The habit of self-education. Working in a group.

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	knows the ways of communication between cells and between the cell and the extracellular matrix, as well as signaling pathways in the cell, as well as examples of disorders in these processes leading to the development of cancer and other diseases;	B.W17	O, ZAO
W02	knows the processes: cell cycle, proliferation, differentiation and aging of cells, apoptosis and necrosis and their importance for the functioning of the body;	B.W18	
W03	knows the basics of stem cells and their use in medicine;	B.W19	
W04	knows the course and regulation of reproductive functions in women and men;	B.W22	
W05	knows the aging mechanism of the body;	B.W23	
K01	sees and recognizes their own limitations and makes self-assessment of educational deficits and needs	K.5	
K02	use objective sources of information	K.7	

Table presenting LEARNING OUTCOMES in relation to the form of classes								
No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical classes	Clinical classes	Simulations	E-learning	Other...

W01	B.W17	X					X	
W02	B.W18	X						
W03	B.W19	X						
W04	B.W22	X						
W05	B.W23	X						
K01	K.5	X					X	
K02	K.7	X					X	

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
Winter semester			
	Lectures	8 (6+2eL)	
TK01	Methods in histology	1	B.W18, K5, K7
TK02	Cell cycle	1	B.W18, K5, K7
TK03	Cytoskeleton, e-learning	1 eL	B.W17, K5, K7
TK04	Cell aging	1	B.W18, B.W23, K5, K7
TK05	Niches of stem cells	1	B.W.19, K5, K7
TK06	Cell differentiation	1	B.W19, K5, K7
TK07	Cytophysiology of skin. Endocrine function of skin.	1	B.W17, K5, K7
TK08	Cancerogenesis, e-learning	1 eL	B.W17, K5, K7
Summer semester			
	Lectures	7 (5+2 eL)	
TK01	Cytophysiology of endothelium	1	B.W17, K5, K7
TK02	Cell signaling	1	B.W17, K5, K7
TK03	Your second brain	1	B.W17, K5, K7
TK04	Cytophysiology of fertilization and implantation, e-learning	1 eL	B.W17, B.W22, K5, K7
TK05	Endo- and exocytosis	1	B.W17, K5, K7
TK06	Cell adhesion molecules, e-learning	1 eL	B.W17, B.W22, K5, K7
TK07	Tissue barriers	1	B.W17, K5, K7

Booklist
Obligatory literature:
1. Junqueira's Basic Histology: Text and Atlas, Fifteenth Edition
2. Materials provided by the teacher.
Supplementary literature:
1. Essential Cell Biology by. Alberts et all.

Student's workload

Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	15
Time spent on preparation to seminars/ practical classes	0
Time spent on reading recommended literature	5
Time spent on writing report/making project	0
Time spent on preparing to colloquium/ entry test	0
Time spent on preparing to exam	0
Other: Preparation for passing the course for the grade	10
Student's workload in total	30
ECTS credits for the subject (in total)	1 (0.5/0.5)

*

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

RZC – 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...

ZAO – graded assessment