



Syllabus for academic year: 2021/2022 Training cycle: 2019/2020 – 2024/2025													
Description of the course													
Course	Patomorfologia (1) Pathology (1)						Group of detailed education results						
							Group code		Group name				
							C		Morphology science				
Faculty	Faculty of Medicine												
Major	medicine												
Level of studies	<input checked="" type="checkbox"/> X uniform magister studies <input type="checkbox"/> 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies												
Form of studies	<input checked="" type="checkbox"/> X full-time <input type="checkbox"/> part-time												
Year of studies	II						Semester:		<input checked="" type="checkbox"/> X summer				
Type of course	<input checked="" type="checkbox"/> X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / optional												
Language of study	<input type="checkbox"/> Polish <input checked="" type="checkbox"/> X English												
Number of hours													
Form of education													
	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)	Foreign language Course (FLC)	Physical Education (PE)	Vocational Practice (VP)	Directed Self-Study (DSS)	E-learning (EL)
Winter semester:													
Department of Clinical and Experimental Pathology (Dep. in charge of the course)	30			55									
Direct (contact) education ¹				55									
Distance learning ²	30												
Educational objectives (max. 6 items) C1. Knowing basic issues of contemporary pathology C2. Knowing the mechanism of development of disease C3. Learning the correlation of macro and microscopical features with clinical findings C4. Using the light microscopy practice C5. Learning the bases of autopsy													

¹ Education conducted with direct participation of university teachers or other academics

² Education with applied methods and techniques for distance learning



C6. Development social competences needed to practice the medical profession, in accordance with graduate's profile			
Education result for course in relation to verification methods of the intended education result and the type of class:			
Number of detailed education result	Student who completes the course knows/is able to	Methods of verification of intended education results	Form of didactic class <i>*enter the abbreviation</i>
C.W26.	The pathomorphological nomenclature	Test MCQ	L, MC
C.W27.	The basic mechanisms of cells and tissues damage	Test MCQ	L, MC
C.W31.	The issues in detailed organ pathology, macroscopic and microscopic images and the clinical course of pathomorphological changes in individual organs	Test MCQ	L, MC
C.W32.	The consequences of developing pathological changes on topographically adjacent organs	Test MCQ	L, MC
C.W.33.	The external and internal pathogens, modifiable and non-modifiable	Test MCQ	L, MC
C.U9.	Makes preparations and recognize pathogens under the microscope	presentation	MC
C.U11.	Associate the images of tissue and organ damage with clinical signs of disease, history and laboratory findings	presentation	MC
* L- lecture; SE- seminar; AC- auditorium classes; MC- major classes (non-clinical); CC- clinical classes; LC- laboratory classes; CSC- classes in simulated conditions; PCP- practical classes with patient; FLC- foreign language course; PE- physical education; VP- vocational practice; DSS- directed self-study; EL- E-learning.			
Student's amount of work (balance of ECTS points):			
Student's workload (class participation, activity, preparation, etc.)		Student Workload	
1. Number of hours of direct contact:		55	
2. Number of hours of distance learning:		30	
3. Number of hours of student's own work:		129,5	
4. Number of hours of directed self-study		n/a	
Total student's workload		214,5	
ECTS points for course		9	
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)			
Lectures:			
1. INTRODUCTION TO PATHOLOGY: history of pathomorphology, causes of diseases and concepts: hereditary, congenital, acquired, family disease; diagnostic methods used in pathomorphology [standard and auxiliary methods], legal elements related to pathomorphology, tumor markers, proteomics.			
2. DEGENERATIONS. METABOLIC DISTURBANCES: general classification and mechanisms of degenerations.			
3. CELL INJURY, NECROSIS, ATROPHY: apoptosis, autophagy, pathology of extracellular matrices, signs of death, atrophy and aging of the organism, death and regeneration, repair, wound healing, metaplasia.			
4. DISTURBANCES OF CIRCULATION: edema, hyperemia, ischemia, thrombosis, embolism and infarction.			
5. INFLAMMATION GENERAL: classification of acute and chronic inflammation			



6. INFLAMMATION SPECIFIC: syphilis, tuberculosis, sarcoidosis, actinomycosis, typhoid fever, listeriosis, toxoplasmosis, brucellosis, tularemia, leprosy, Slavic leprosy, rabies, mycoses, viral diseases.
7. ALLERGY, AUTOIMMUNE DISEASES: pathology of autoimmune and allergic disease, pathomorphology of organ changes, microchimerism.
8. INTRODUCTION TO ONCOLOGY: cell differentiation, general characteristics of neoplasms, precancerous conditions, paraneoplastic syndromes, carcinogenesis, tumor epidemiology, TNM classification, personalized cancer therapy.
9. EPITHELIAL TUMORS: pre-invasive cancer, cancer cytodiagnosis, benign and malignant neoplasms, ways of cancer spread.
10. MESENCHYMAL TUMORS: division and characteristics of benign and malignant tumors.
11. PATHOLOGY OF LUNGS, BRONCHI AND PLEURA 1: developmental disorders, circulatory disorders, changes in aeration, pneumonia, pneumoconiosis.
12. PATHOLOGY OF LUNGS, BRONCHI AND PLEURA 2: cancers of the lung and pleura, pleural and mediastinal diseases.
13. PATHOLOGY OF HEART: developmental disorders, inflammations, cardiomyopathies, heart tumors.
14. PATHOLOGY OF VESSELS: veins, lymph vessels, neoplasms in blood and lymph vessels, pathology of atherosclerosis.
15. ALIMENTARY TRACT PART 1: oral cavity, salivary glands, esophagus, stomach.

Classes:

1. INTRODUCTION AND TECHNICAL REMARKS
2. CELL INJURY. DEGENERATIONS: cellular responses to stress, mechanisms of cell injury, types of cell death, adaptations of cellular growth and differentiation. General classification and mechanisms of degenerations.
3. NECROSIS AND ATROPHY: the classification and morphological types of necrosis, physiology and pathology of atrophy.
4. DISTURBANCES OF CIRCULATION: pathogenesis and classification of edema, hyperemia, ischemia, thrombosis, embolism and infarction.
5. COLLOQUIUM I.
6. INFLAMMATION 1 – GENERAL: features, classification and causes of acute and chronic inflammation.
7. INFLAMMATION 2- SPECIFIC: chronic and infectious diseases.
8. INTRODUCTION TO ONCOLOGY: basics of cancerogenesis, the kinds of tumor growth and differentiation, the morphologic features of anaplasia, the mechanisms of invasion and metastasis, general features of benign and malignant tumors.
9. EPITHELIAL TUMORS: classification and pathology of epithelial benign and malignant tumors.
10. MESENCHYMAL TUMORS: classification and pathology of epithelial benign and malignant tumors.
11. COLLOQUIUM II.
12. PATHOLOGY OF BRONCHI AND PLEURA: diseases of lung, bronchi and pleura, neoplasms.
13. PATHOLOGY OF HEART AND VESSELS: cardiovascular diseases, neoplasms.
14. RECAPITULATION.

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

1. Kumar, Abbas "Robbins and Cotran Pathologic Basis of Disease" 10th Edition, Elsevier 2021
2. Underwood's Pathology: a Clinical Approach, 7th Edition, Elsevier 2018



3. 7th Edition

Additional literature and other materials (no more than 3 items)

1. internet website: www.pathologyoutlines.com
2. Polish Journal of Pathology (in English)

Preliminary conditions: None

Conditions to receive credit for the course: (specify the form and conditions of receiving credit for classes included in the 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)

Attention! Attendance cannot be a condition for passing the course

Credit for classes: points for partial colloquiums and presentation of selected topics and cases

Exam: theory test MCQ – 100 questions/ 5 answers for each single question, with one correct answer (one point for one correct answer)

Grade:	Criteria for courses ending with a grade ³
Very Good (5.0)	≥85% correct answers
Good Above (4.5)	80-84% correct answers
Good (4.0)	75-79% correct answers
Satisfactory Plus (3.5)	70-74% correct answers
Satisfactory (3.0)	65-69% correct answers

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Satisfactory (3.0)	65-69% correct answers

Department in charge of the course:	Department of Clinical and Experimental Pathology of Medical University in Wrocław
Department address:	Ul. Marcinkowskiego 1, 50-368 Wrocław
Telephone:	71 784 12 20
E-Mail:	wl-1@umed.wroc.pl

Person in charge for the course:	prof. dr hab. Piotr Ziółkowski
Telephone:	71 734 12 12
E-Mail:	piotr.ziolkowski@umed.wroc.pl

List of persons conducting specific classes:

Name and surname	Degree/scientific or professional title	Discipline	Performed profession	Form of classes
Piotr Ziółkowski	Professor	medical science	physician, specialist of pathology	L, MC
Marta Woźniak	Ass. Professor	medical science	molecular biologist	MC
Kamila Duś-Szachniewicz	Ass. Professor	medical science	molecular biologist	MC
Piotr Kupczyk	PhD	medical science	molecular biologist	MC

³ The verification must cover all education results, which are realized in all form of classes within the course



Sebastian Makuch	MSc	medical science	biotechnologist	MC
Martyna Nowak-Perlak	MSc	medical science	biotechnologist	MC
Katarzyna Gdesz-Birula	MSc	medical science	biotechnologist	MC

Date of Syllabus development
8-10-2021

Syllabus developed by
Kamila Dus-Szachniewicz

Dean's signature


Wrocław Medical University
Faculty of Medical Studies
prof. Beata Sbiśczńska, PhD

Signature of Head(s) of teaching unit(s)
Uniwersytet Medyczny we Wrocławiu
Katedra Patologii Klinicznej i Doświadczalnej
ZAKŁAD PATOLOGII OGÓLNEJ I DOŚWIADCZALNEJ
kierownik

prof. dr hab. Piotr Ziółkowski