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| **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  C | Group name Morphology science |
| **Faculty** | Faculty of Medicine |
| **Major**  | medicine |
| **Level of studies** | X uniform magister studies 1st degree studies  2nd degree studies 3rd degree studies  postgraduate studies |
| **Form of studies** | X full-time part-time |
| **Year of studies**  | II | **Semester:** | X summer |
| **Type of course** | X obligatory limited choice free choice / optional  |
| **Language of study**  |  Polish 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]](#footnote-1) |  |  |  | 55 |  |  |  |  |  |  |  |  |  |
| Distance learning[[2]](#footnote-2) | 30 |  |  |  |  |  |  |  |  |  |  |  |  |
| **Educational objectives** (max. 6 items)C1. Knowing basic issues of contemporary pathologyC2. Knowing the mechanism of development of disease C3. Learning the correlation of macro and microscopical features with clinical findingsC4. Using the light microscopy practiceC5. Learning the bases of autopsyC6. 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*\*enter the abbreviation* |
| 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. INNFLAMMATION GENERAL: classification of acute and chronic inflammation6. 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 REMARKS2. 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. COLLOQIUIUM 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.com2. 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 courseCredit 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) |
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| **Grade:** | **Criteria for courses ending with a grade[[3]](#footnote-3)** |
| Very Good (5.0) | $\geq $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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| **Grade:** | **Criteria for exam³** |
| Very Good (5.0) | $\geq $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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| **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 |
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| **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 |
| Sebastian Makuch | MSc | medical science | biotechnologist | MC |
| Martyna Nowak-Perlak | MSc | medical science | biotechnologist | MC |
| Katarzyna Gdesz-Birula | MSc | medical science | biotechnologist | MC |
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| **Date of Syllabus development**  | **Syllabus developed by**  |
| 8-10-2021 | Kamila Dus-Szachniewicz |
| **Signature of Head(s) of teaching unit(s)** |
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 **Dean’s signature** |
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1. Education conducted with direct participation of university teachers or other academics [↑](#footnote-ref-1)
2. Education with applied methods and techniques for distance learning [↑](#footnote-ref-2)
3. The verification must cover all education results, which are realize in all form of classes within the course [↑](#footnote-ref-3)