

# SYLLABUS

for the education cycle starting in the academic year 2021/2022

Name of a course/ module	<b>Pathomorphology</b>
Name of a department where course is held	Department of Medical Pathomorphology Medical University of Bialystok
E-mail of department	patlek@umb.edu.pl
Faculty of	Medicine with Division of Dentistry and Division of Medical Education in English
Name of a field of study	Faculty of medicine
Level of education*	First degree studies, Uniform master's degree studies
Form of study	full time 0 part time 0
Language of instruction	Polish 0 English 0
Type of course	obligatory 0 facultative D
Year of study / Semester	I <input type="checkbox"/> II <input checked="" type="checkbox"/> III <input checked="" type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/>
Introductory courses with preliminary requirements	Anatomy, histology, physiology, pathophysiology, biochemistry, laboratory medicine Students ought to have the basic knowledge of anatomy and histology of human tissues. Student must understand the basics of human physiology in order to understand the mechanisms of disease. Students should have a basic knowledge of basic pathomechanisms of disease entities, in order to correlate them with the histopathologic picture. In correlation with the basics of pathophysiology, laboratory medicine student is able to learn the material in the field of pathology.
Number of didactic hours with specification of forms of conducting classes	II year 35 lectures, 75 labs III year 20 lectures, 45 labs
* Assumptions and aims of the course	Students are obligated to possess the knowledge about: basic pathomorphologic nomenclature, basic mechanisms and morphology about cell death, cell injury, adaptive processes, hemodynamic disorders, basic definitions associated with acute and chronic inflammation. Student ought to know intrinsic and extrinsic pathogens, immunological reactions, molecular alterations associated with carcinogenesis, neoplasms and diseases of childhood. Student must know all of the morphological changes associated with the diseases, must be able to merge changes with the diseases and clinical trials, and must have the basic knowledge about systemic pathology, diseases of organ systems: <ol style="list-style-type: none"> <li>1. Blood Vessels</li> <li>2. The Heart</li> <li>3. Diseases of White Blood Cells, Lymph Nodes, Spleen, and Thymus</li> <li>4. Red Blood Cell and Bleeding Disorders</li> <li>5. The Lung and upper respiratory tract</li> <li>6. Head and Neck</li> <li>7. The Gastrointestinal Tract</li> <li>8. Liver and Biliary Tract</li> <li>9. The Pancreas</li> <li>10. The Kidney</li> <li>11. The Lower Urinary Tract and Male Genital System</li> <li>12. The female Genital Tract</li> <li>13. The Breast</li> <li>14. The Endocrine System</li> <li>15. The Skin</li> <li>16. Bones, Joints, and Soft Tissue Tumors</li> <li>17. Peripheral Nerve and Skeletal Muscle</li> <li>18. The Central Nervous System</li> <li>19. The Eye</li> </ol>

<b>Didactic methods</b>	<ul style="list-style-type: none"> <li>- lectures</li> <li>- consultation (both regular and organized in individual cases)</li> <li>- discussion during the labs</li> <li>- slides presentations</li> <li>- Slides watching (students try to diagnose the histopathological slides under the microscope and do the differential diagnosis)</li> <li>- case description</li> <li>- self study</li> <li>- study of the literature</li> <li>- other practical classes (electives, grossing, autopsy, intraoperative diagnosis, fine needle biopsy)</li> </ul>
<b>Full name of the person conducting the course</b>	employed scientific and teaching Staff
<b>Full name of the person responsible for teaching</b>	Grzegorz Zalewski MD, PhD

Symbol and number of learning outcomes according to the teaching standards and other learning outcomes	Description of directional learning outcomes	Form of classes	Verification methods for achieving intended learning outcomes
<b>Knowledge</b>			
C.W25 C.W26 CW27 CW28 CW29 CW30 CW31 CW32	Pathomorphological terminology Basic mechanisms of cell and tissue damage Clinical course of specific and unspecific inflammation, regeneration processes of organs and tissues Definition and pathophysiology of the shock, especially various causes of shock and multiorgan failure Etiology of hemodynamic disorders, progressive and retrogressive changes Problems of an organ pathology, macro-and microscopic images and clinical course of pathomorphological lesions in the organ Consequences of process of pathologic changes for adjoining organs Internal and external pathogenic factors and modifiable and unmodifiable ones	Labs, seminars	<ul style="list-style-type: none"> <li>- observation of the student's work</li> <li>- evaluation of the activity in the classroom</li> <li>- assessment of preparation for classes</li> <li>- discussion in class</li> <li>- partial tests</li> <li>- preliminary tests</li> <li>- case description</li> <li>- final exam- test</li> </ul>
<b>Skills</b>			
DU6 DU11 DU12 DU15 DU17	Students should acquire the skills about: 1. method of securing material for histopathological research 2. choosing the most proper method for specimen evaluation (histopathological evaluation, cytological, oligobiopsy, intraoperative examination) 3. Macroscopic evaluation of the material (grossing) 4. ability to efficiently microscopy and the diagnosis of basic morphological disorders 5. ability to perform differential diagnosis 6. enforcement of section essential organs	Labs, seminars	<ul style="list-style-type: none"> <li>- observation of the student's work</li> <li>- evaluation of the activity in the classroom</li> <li>- assessment of preparation for classes</li> <li>- discussion in class</li> <li>- partial tests</li> <li>- case description</li> </ul>
<b>Social competence</b>			



<p>He /She recognizes his/her own diagnostic and therapeutic limitations, educational needs, planning of educational activity</p> <p>He /She is able to work in a team of professionals, in a multicultural and multinational environment</p> <p>He /She implements the principles of professional camaraderie and cooperation with representatives of other professionals in the range of health care</p> <p>He /She observes doctor-patient privilege; and patient rights</p>	<p>Labs, seminaries</p>	<p><u>Summarizing methods e.g.</u> Continuous assessment by teachers (observation)</p> <p><u>Forming methods, e.g.</u> - observation of the student's work - discussion in class - opinions of patients, colleagues</p>
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ECTS points	Należy podać liczbę punktów ECTS przypisaną przedmiotowi.
Student Workload	
Form of activity	Number of hours to complete the activity
Classes that require the participation of a teacher	
1. Realization of the course: lectures (according to the curriculum )	55 (35 IIED, 20 IIIED)
2. Realization of the course: classes (according to the curriculum )	120 (75 IIED, 45 IIIED)
3. Realization of the course: seminars; (according to the curriculum)	0
4. Realization of the course: electives	0
5. Participation in consultation	
Total hours: 175	
Student self-study	
<i>1 punkt ECTS oznacza 25-30 godzin pracy studenta w różnych formach, takich jak np.:</i>	
1. Preparation for the theoretical and practical classes (realization of projects, documentation, case description etc.)	25 hours (1 ECTS)
2. Preparation for tests/credits	50 hours (2 ECTS)
3. Preparation for an exam/final test-credit	50 Hours (2 ECTS)
Total hours: 125 hours	

Course contents:	
Learning outcomes (symbol and number)	Topics

C.W25	Cellular adaptations, cell injury and death
C.W26	Acute and chronic inflammation
CW27	Tissue renewal and repair, regeneration, healing, and fibrosis
CW28	Hemodynamic disorders, thromboembolic disease and shock
CW29	Genetic disorders, environmental and nutritional pathology
CW30	Diseases and neoplasms of infancy and childhood
CW31	Diseases of blood vessels and heart
CW32	Hematopoietic system pathology, non-Hodgkin and Hodgkin lymphomas, pathology of thymus and spleen
DU6	The upper air tract pathology, lung diseases, lung tumors
DU11	The gastrointestinal tract pathology
DU12	Liver and biliary tract diseases and neoplasms
DU15	Inflammatory diseases of pancreas and neoplasms
DU17	Kidney pathology- glomerulonephritis, interstitial diseases, inflammation, neoplasms
	The lower urinary tract pathology and male genital system diseases and neoplasms
	The female genital tract pathology
	Breast pathology, breast cancer- etiology, predictive and prognostic features
	The endocrine system pathology, most common endocrine system syndromes
	Skin pathology
	Bone, joints pathology, and soft tissue tumors
	The central and peripheral nervous system pathology, including eye pathology

**Obligatory textbook: (1-2 pozycje)**

Kumar, Abbas, Fausto "Robbins and Cotran Pathologic basis of disease", 8th edition

**Optional textbook: (1-2 pozycje)**

Klatt EC. "Robbins and Cotran Atlas of Pathology"  
Fletcher C. "Diagnostic histopathology of tumors"

**Criteria for assessing the achieved learning outcomes and the form and conditions for receiving credit: Należy określić w szczególności: zasady dopuszczenia do egzaminu, zwalniania z egzaminu, sposób i warunki zaliczenia zajęć, łącznie z określeniem zasad zaliczania nieobecności oraz określeniem liczby godzin nieobecności kwalifikujących do niezaliczenia przedmiotu oraz możliwości i formy wyrównywania zaległości**



## REGULATIONS:

1. The internal regulations of the Department of Medical Pathomorphology are consistent with the Study Statute of the Medical University of Białystok.
2. The Pathomorphology course is carried out in the didactic rooms of the Department of Medical Pathomorphology in accordance with the detailed schedule of the lectures and classes announced in the information board and Department's web site.

### ATTENDANCE & BEHAVIOUR

3. Upon entering the lectures and classes student is obligated to change shoes. Coats, jackets etc. should be left in the cloak-room.
4. During the lectures and classes mobile phones, pagers and any audio devices must be absolutely switched off. During the lectures and classes taking photographs is forbidden.
5. It is prohibited to smoke, eat and drink in the didactic rooms.
6. Student is obliged to participate in at least 70% of classes /labs. Absence should be excused as soon as possible – at the latest on next 2 weeks. It is demanded in the case of health reasons a medical certificate of temporary disability and in other cases a certificate of proper authorities which original or copy should be left in the Department. It is possible to pass the exercise in a case of excused absence on exercise with another group. Unexcused absence during the labs results in subtraction of 6 pts/absence from the final total amount of points available in each semester (maximum – 18pts for missing 3 labs). If a Student misses > 30% of labs the Dean is informed.

### EVALUATION

7. Basing of the obligatory textbooks (Robbins Basic Pathology, 9<sup>th</sup> edition and Robbins & Cotran Pathologic Basis of Disease, 9<sup>th</sup> edition) Student should be theoretically prepared to the current classes. During the course Student's knowledge is evaluated based on the credits.
8. After some sections students are obliged to take partial credits according to the schedule (available on the website). The credit is multiple choice question test covering topics of given section and consists of maximum 30 multiple choice text questions (MCQs) (up to 5 questions may contain photos). It is possible to obtain maximum 30 points/test. Presence at the partial credits is obligatory. There is no opportunity to take the test on different dates. The only exception is justified absence. In such cases the student has to contact the coordinator to fix additional term of exam at the end of the semester.
9. All credits are taken as scheduled in the lecture room. The credits will last 30-40 minutes. Results of the credits will be announced in one week by email to the class representative. Student has right to inspect the answer sheet on the day of announcing of the results.
10. To pass the semester the student has to attend the labs according to rules mentioned above as well as to obtain adequate score i.e., 55% of points available in each semester.
11. At the end of each semester the students who do not obtain adequate score can take the midterm exams. They consist of 30 MCQs including the material of the particular semester. To pass them students have to obtain 55% of available points. Students who fail midterm will take oral semester exam with the Head of the Department
13. The final exam (1 term) is scheduled to the summer examination session and consists of 120 questions including 15-20 questions concerning picture slides (taken from online library <http://library.med.utah.edu/WebPath/ORGAN.html>) - 1 point for each correct answer. Minimum

amount of points to pass the exam is 60%- 72 points.  
If student participated in >90% of all classes will get bonus points on the final exam. The amount of bonus points depends on the number of points received during semesters from all credits (but not midterm):

- ≥60% of points - 1 pts
- ≥70% of points - 3 pts
- ≥80% of points - 4 pts
- ≥90% of points - 5 pts

Retake (one term) of the final exam takes place on September (has a form of the test exam).

14. The scores for the final exam are as follows:

Grade	%
very good (5.0)	95-100 (114-120 pts)
better than good (4.5)	87-94 (104 - 110) pts
good (4.0)	78-86 (94-103) pts
satisfactory (3.5)	69-77 (83-93 pts)
pass (3.0)	60-68 (72 -82 pts)
unsatisfactory/fail (2.0)	0-59 (<=71 pts)

Absence during final exam should be excused at latest on the day of exam.  
Unexcused absence = 2 – unsatisfactory mark of this term.

15. During both in-credits and final exam Student may not consult any written materials or electronic devices. Mobile phones, pagers and any audio devices must be absolutely switched off. Moreover, Student may not have verbal or non-verbal contact with any person other than teaching assistant. Any violations of these rules will be regarded as cheating and will result in failing of the credit/exam.

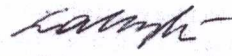
16. If you have any comments, please do not hesitate to contact the Coordinator: Grzegorz Zalewski, or Head of the Department: Joanna Reszec

**KIEROWNIK**  
Zakładu Patomorfologii Lekarskiej UMB

.....  
(date and signature of Joanna Reszec - Chairman of the syllabus)  
Joanna Reszec MD, PhD, Ass. Professor

.....  
(date and signature of the Head of the Department where the course is held)

and

  
Grzegorz Zalewski MD, PhD  
.....  
(course coordinator)