

PATHOLOGY WITH LABORATORY TECHNIQUES	
GENERAL INFORMATION	
Course coordinator	Assoc. Prof. Ksenija Marjanović, MD, PhD
Assistant/Associate	Prof. Branko Dmitrović, MD, PhD Assoc. Prof. Milanka Mrčela, MD, PhD Asst. Prof. Jasmina Rajc, MD, PhD Andrej Kovačević, MD Sandra Nekić, MD Zlatka Radičević, MD Irena Fröhlich Zagorac, MD Marina Bakula, MMed.Lab.Diagn.
Study Programme	Undergraduate University Study of Medical Laboratory Diagnostics
Status of the course	mandatory
Year of study, semester	2 nd ; 3 rd semester
ECTS	5
Workload (hours)	Lectures: 30; Seminars: 10; Laboratory exercises: 20
Expected number of students	30 - 35
COURSE DESCRIPTION	
Course objectives	
Familiarize students with the basic principles of general pathology, organ pathology and organ systems. Explain to students the causes of individual diseases, morphological changes in organs and tissues and their effects. Familiarize students with the basic principles of tissue processing, preparation and staining of histopathological slides.	
Course requirements and required competences	
There are no specific requirements for this course except those defined in the study program curriculum.	
Learning outcomes at the Programme level	
1.1, 1.2, 2.1, 2.2, 2.3, 2.6, 3.1	
Learning outcomes at the course level	
After attending lectures and exercises, self-learning and successfully passing the exam, the students will be able to: <ol style="list-style-type: none"> 1. interpret the underlying principles of organ and organ system pathology. 2. apply the underlying principles of general pathology in practice. 3. apply the underlying principles of organ and organ system pathology. compare morphological changes in cells, tissues and organs. 4. identify the causes and mechanisms of diseases. 5. critically assess functional effects of morphological changes. conduct an experiment by using acquired knowledge and skills. 	
Course content	
Lectures and seminars: Introduction to pathology. Working in a histopathology laboratory. <i>General pathology:</i> Cell adaptation processes; Cellular damage and death; Acute and chronic inflammation; Reparation; Regeneration; Healing; Hemodynamic disorders; Genetic disorders; Immune disorders; Neoplasms; Environmental pathology. <i>Organ and organ system pathology:</i> Cardiovascular system; Respiratory system; Hematopoietic system; Digestive system; Liver and biliary system; Pancreas; Kidneys and urinary system; Male and female reproductive system; Breasts; Endocrine system; Skin; Bones and joints; Peripheral nerves; Muscle; Central nervous system.	

Exercises: Processing of bioptic material; Preparation of histopathological slides; Preparing frozen sections on fresh material.

Form of instruction

Lectures; seminars; lab exercises.

Student obligations

Attending all forms of instruction is mandatory, and the student must sit for all exams. A student can be excused from 30% of every form of instruction. Missed exercises must be compensated by sitting for an exam.

Monitoring student learning (Interconnectedness of learning outcomes, teaching methods and grading)

Curricular activities	ECTS	Learning outcome	Student participation	Assessment methods	Points	
					Min.	Max.
Lecture attendance	1.5	1,4,5,6	Class attendance,	Records	2	5
Seminars		2,3,4,6	Active participation in seminars,		8	20
Exercises		1,3,7	Completed exercise and an accepted paper	Paper	10	25
Final exam	2.5	1-7	Preparation for the final exam	Written exam	30	50
Total	4				50	100

Valuation of the written part of the final exam

Percentage of correctly solved tasks (%)	Points
60.00-64.99	30
65.00-69.99	33
70.00-74.99	36
75.00-79.99	39
80.00-84.99	41
85.00-89.99	43
90.00-94.99	47
95.00-100	50

Formulation of the final grade:

Points achieved in class are combined with points achieved on the final exam. The grading shall be carried out by using absolute distribution, i.e. shall be based on the final achievement and compared to the numerical system as follows: A – excellent (5): 90-100 points; B – very good (4): 80-89.99 points; C – good (3): 65-79.99 points; D – sufficient (2): 50-64.99 points.

Mandatory reading (available in the library or in other mediums)

Title	Number of copies in the library	Availability in other mediums
Damjanov I., Seiwert S., Jukić S., Nola M. (eds.): Patologija [Pathology], 5th ed. Zagreb: Medicinska naklada, 2018		
Additional reading		
Robbins SL, Cotran, RS., Robbins Pathologic Basis of Disease. 9th ed. Saunders Company, Philadelphia, 2014		
Quality monitoring methods ensuring the acquisition of competences upon completion		
An anonymous, quantitative, standardized student survey on the course and the work of professors conducted by the Quality Assurance Office of the Faculty of Medicine Osijek.		