

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KFT/13-Mgr/24	Course title: Pathology
Educational activities: Type of activities: lecture / laboratory practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning	
Number of credits: 6	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Mandatory 100% participation in laboratory exercises and lectures and sufficiently demonstrated readiness for practical exercises. Students' readiness for the exercises is continuously verified by tests (written, oral). Excused absence from exercises (max. 2x) is replaced by: a) substitution; b) by preparing a written work; c) written or oral examination. During the semester, students take 2 interim assessment tests (pre-tests), whose writing on at least 60% of each test conditions the possibility to participate in the final exam. Students take the final (examination) test in computer form. A pass rate of at least 60% is required for recognition of the examination test. Evaluation (mark and score): A 92-100%, B 84-91%, C 76-83%, D 68-75%, E 60-67%, FX < 60%. Scale of assessment (preliminary/final): 0/100	
Learning outcomes: Completing the subject, students will gain knowledge of general pathology - focused on the fundamental cellular and tissue responses to pathologic stimuli, and special pathology – oriented on the specific responses of specialized organs and systems of the diseased organism. Students recognize the causes of disease, underlying mechanisms that result in the clinical signs, symptoms, and subsequent complications. Student could understand the structural and functional changes at the level of cells, tissues, organs, and systems of the diseased organism, as well as the disturbances in the regulatory mechanisms. The obtained knowledge helps him to bridge basic science to pharmacology and clinically oriented subjects.	
Class syllabus: Introduction to pathology. Concept of disease and illness, etiology, pathogenesis, clinical manifestations, classification, and incidence of diseases. Principles of molecular pathogenesis and genetics. Genetic abnormalities, developmental disorders. Hereditary diseases. Pain – etiopathogenesis, symptomatology, consequences, prophylaxis. Mechanisms of disturbances in vascular circulation. Inflammation - etiology, acute, chronic, pathomechanisms, role of blood elements, mediators. Edema. Fever. General symptomatology – causes, pathomechanisms. Alterations in blood pressure and circulation. Hypertension. Etiopathogenesis, symptomatology, compensatory mechanisms, complications. Shock (hypovolemic, cardiogenic, septic, anaphylactic, neurogenic, endocrine). Alterations in coronary circulation. Ischemic disease of the	

heart. Myocardial Infarction. Definition, type/form/clinical manifestation, etiopathogenesis, symptomatology, compensatory mechanisms, consequences. Rhythm disturbances. Heart failure. Diseases of the respiratory system. Cough, Asthma. Bronchitis, Obstructive airways disease. Respiratory insufficiency. Alterations of the digestive function. Basic manifestations of GIT disorders. Peptic ulceration - disturbances of the Gastric Juice Production. Liver diseases - jaundice, hepatitis, cirrhosis, failure.

Alterations of the Hormonal Regulation. Pathophysiology of renal disorders. General symptomatology, Glomerular diseases. Tubulo-interstitial disorders. Renal Failure. Selected disorders of the nervous system. Epilepsy, neurodegenerative disorders (Alzheimer Disease, Parkinson Disease). Sleeping disorders, memory disturbances, pathophysiology of ANS. Psychiatric disorders - anxiety and personality disorders, depression, bipolar disorder, schizophrenia. Basic concepts in oncology. Definitions and epidemiology. Classification. Benign and malignant neoplasia. Clinical manifestation, Metastasis, Prognosis. Disorders of the Sensory System.

In the practical part of subject students practice communicating ideas, interpret relevant data, analyze problems, and solve them. Students will focus on practicing basic terminology, pathophysiology of symptoms, cases in selected systems, diagnostic tests, e.g. cognitive ability testing, analysis of records of pathologically altered functions of selected organs, investigative techniques, biochemical examinations. Pathophysiology of skin changes in childhood, adulthood, older age, and infectious diseases. Diets and recommendations for special diets.

Teaching includes self-study of educational videos, assigned problems and independent student work.

Recommended literature:

- MOHAN, Harsh. 2011. Patológia. 1. slovenské vyd. Bratislava: Balneotherma. ISBN 9788097015664.
- MAČÁK, Jirka. 2002. Obecná patologie. 1. vyd. Olomouc: Univerzita Palackého, Lékařská fakulta. ISBN 8024404362.
- MAČÁK, Jirka, MAČÁKOVÁ, Jana a DVOŘÁČKOVÁ, Jana. 2012. Patologie. 2. dopl. vyd. Praha: Grada. ISBN 9788024735306.
- SILBERNAGL, Stefan a LANG, Florian. 2012. Atlas patofyziologie. 2. české vyd. Praha: Grada, ISBN 9788024735559.
- NEČAS, Emanuel a kol. 2004. Patologická fyziologie orgánových systémov: Část I. Praha: Karolinum. ISBN 8024606151.
- NEČAS, Emanuel a kol. 2004. Patologická fyziologie orgánových systémov: Část II. Praha: Karolinum. ISBN 8024606747.
- NEČAS, Emanuel. 2006. Obecná patologická fyziologie. Praha: Karolinum. ISBN 9788024616889.
- HULÍN, Ivan a kol. 2005. Patofyziológia a klinická fyziológia pre magisterské a bakalárske štúdium. Bratislava: Slovak Academic Press. ISBN 8089104665.
- PLANK, Lukáš a HANÁČEK, Ján. 2007. Patologická anatomia a patologická fyziológia. Martin: Osveta. ISBN 8080632410.
- KOSÍROVÁ, Stanislava a kol. 2022. Vybrané otázky ku skúške z patológie pre študentov farmácie. 1. vyd. Bratislava: Univerzita Komenského v Bratislave, 9788022355070

Languages necessary to complete the course:

Slovak language

Notes:

Past grade distribution						
Total number of evaluated students: 142						
A	ABS	B	C	D	E	FX
0,0	0,0	13,38	24,65	15,49	33,1	13,38
Lecturers: doc. PharmDr. Tomáš Rajtík, PhD., doc. PharmDr. Stanislava Kosírová, PhD., PharmDr. Eva Kráľová, PhD., PharmDr. Dominika Dingová, PhD., PharmDr. Attila Kulcsár, PhD., Mgr. Kristína Ferenczyová, PhD., Mgr. Barbora Kaločayová, PhD., PharmDr. Zuzana Kiliánová, PhD., PharmDr. Nikola Chomaničová, PhD.						
Last change: 12.09.2024						
Approved by: doc. PharmDr. Stanislava Kosírová, PhD.						