

Study program: Integrated academic studies in pharmacy			
Type and level of the study program: integrated academic studies			
Course title: Physiopathology (PhIII-PHYSP)			
Teacher: Mirjana J. Đerić, Gorana P. Mitić, Biljana A. Vučković, Branislava P. Ilinčić, Radmila R. Žeravica			
Course status: compulsory			
ECTS Credits: 4			
Condition: -			
Course aim Enabling students to understand the etiology and pathogenesis of diseases and to understand alterations of specific organ and organ systems functions.			
Expected outcome of the course: Knowegde: Acquiring knowledge about pathophysiological alterations, etiological factors as well as developing pathogenetic mechanisms in developing different diseases. Exploring general principles in organ function and organ system disorders. Skills: Student should be introduced with basic principles for performing functional investigations and the way of their performance in different pathophysiological alterations.			
Course description <i>Theoretical education:</i> <ol style="list-style-type: none"> 1. Introduction to pathophysiology. Primary and secondary etiologic factors in diseases. 2. Mechanism of inflammatory reaction. Disorders of barriers and functions of phagocytes. 3. Fever - mechanism, types and pathophysiological significance. 4. Inheritance as an etiological factors in disease. 5. Disorders of protein metabolism (I-III). 6. Disorders of carbohydrate metabolism (I-III). 7. Disorders of lipid metabolism (I-II). 8. Disorders of vitamin and enzyme metabolism. 9. Disorders of water and electrolyte metabolism (I-III). 10. Nutritional factors as etiological factors in diseases. 11. Physical etiological factors in diseases. 12. Chemical etiological factors in diseases. 13. Etiology and pathogenesis of malignant tumors. 14. Pathogenesis of autoimmune diseases (I-II). 15. Disorders of nervous and humoral regulation (I-VII). 16. Pathophysiology of the respiratory system (I-III). 17. Pathophysiology of growth, development and aging. 18. Pathophysiology of the cardiovascular system (I-VI). 19. Pathophysiology of the digestive tract (I-IV). 20. General pathophysiological changes in liver diseases (I-IV). 21. Pathophysiology of the nervous system (I-II). 22. Pathophysiology of the uropoetic system (I-IV). 23. Pathophysiology of the blood and hematopoietic organs – erythrocytes. 24. Pathophysiology of the blood and hematopoietic organs – leukocytes. 25. Pathophysiology of the hemostatic system (I-II). 26. Pathophysiology of musculoskeletal disorders (I-II). 27. Consultation regarding final exam Students do not have practical classes.			
Literature Compulsory <ol style="list-style-type: none"> 1. Huether SE, Mc Cance KL. Understanding Pathophysiology, 6th ed. Elsevier Science, 2016. 2. Porth C. Essentials of Pathophysiology: Concepts of Altered States. Lippincott Williams and Wilkins, 2014. Additional <ol style="list-style-type: none"> 1. Hammer GH, Mc Phee JS. Pathophysiology of disease. An Introduction to Clinical Medicine, 7th ed. Lange Medical Books/McGraw, 2014. 			
Number of active classes			Other:
Lectures: 60	Practice:	Other types of teaching:	Research related activities:
Teaching methods Interactive theoretical and practical education, Consultation, Seminars, Pre Test Consultation.			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	30	Written	
Practices		Oral	50
Colloquium	2x10	
Essay			