

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