

Study program: Integrated academic studies in medicine			
Type and level of the study program: integrated academic studies			
Course title: Clinical immunology (M4-IMNL)			
Teacher: Igor M. Mitić, Tatjana A. Ilić, Marina A. Jovanović, Čongor L. Nađ, Biljana S. Zvezdin, Dejan M. Čelić, Gordana V. Vijatov Đurić, Dušan Đ. Božić, Milica K. Medić Stojanoska, Ivana M. Urošević, Lada V. Petrović, Svetlana B. Kašiković Lečić, Mirna D. Đurić, Slobodan N. Savović			
Course status: elective			
ECTS Credits: 3			
Condition: Pathological anatomy; Pathophysiology; Pharmacology			
Course aim The aim of this course is to provide students with knowledge on principles of clinical immunology, development of immune diseases, diagnostic methods and theoretical and practical aspects of the therapy of immune diseases. The practical goal of education is to provide students with skills for practical work, and to prepare students for future research-scientific work.			
Expected outcome of the course: Students learn about the mechanisms and features of immune system disorders, as well as primary genetic factors underlying immune diseases, diagnostic and therapeutic approach to immune diseases and basic therapeutic methods. Complications of immunomodulatory and immunosuppressive therapies. Students learn how to apply their knowledge in practice: consider immune disease, methods for diagnosis confirmation. Basic and clinical laboratory methods for detection of immune diseases. Basic methods of treatment. Analytical and synthetic thinking in identifying immune diseases: probability of occurrence, clinical manifestations, therapy, treatment of possible complications.			
Course description <i>Theoretical education</i> 1. Introduction to clinical immunology. Immunological diagnosis. 2. Autoimmunity. Systemic lupus erythematosus 3. Vasculitis, Rheumatoid arthritis 4. Rheumatology in childhood 5. Glomerulonephritis 6. Immunodeficiency. Immune therapy. 7. Endocrine diseases associated with immune processes 8. Hematologic diseases associated with immune processes 9. Principles of personalized and transplantation medicine in demyelinized diseases in neurology 10. Allergic dermatoses 11. Transplantation medicine in practice 12. Asthma – immunologic and clinical aspects 13. Immunologic manifestations during nonspecific pulmonary infections 14. Immunologic characteristics of granulomatous diseases 15. Allergic diseases in the ORL region <i>Practical education: exercises, other forms of education, research related activities</i> 1. Immunological laboratory: protein electrophoresis, radial immunodiffusion, agglutination technique for detecting rheumatoid factor and C reactive protein 2. Immunological laboratory: indirect immunofluorescence (heterologous biological substrates, tissue culture, cell smear), diagnostic methods: immunofluorescent immune complexes deposit in tissues, ELISA techniques 3. Clinical examination of immunological and rheumatic patients. 4. Clinical examination and treatment of organ recipient patients 5. Hypersensitivity skin test, clinical examination of patients with skin manifestations of immune diseases; diagnosis and treatment. 6. Functional lung tests in respiratory atopic diseases; clinical examinations and treatment of pulmonary immune diseases 7. Diagnosing and treating systemic atopic reactions (seminar)			
Literature <i>Compulsory</i> 1. Zabriskie JB. Essential Clinical Immunology. Rockefeller University, New York, 2009 2. Burmester GR, Pezzutto A. Color Atlas of Immunology. Thieme 2003			
Number of active classes			Other:
Lectures: 30	Practice: 15	Other types of teaching: Research related activities:	
Teaching methods: Lectures, practical work, clinical work, laboratory work			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	25	Written	
Practices	25	Oral	40
Colloquium		
Essay	10		