

## Elective subjects – 4th year

<b>SELECTED CHAPTERS IN ENDOCRINOLOGY</b> summer semester – C	<b>credits: 1</b>
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<b>PATHOBIOCHEMISTRY AND DISORDERS OF METABOLISM AND NUTRITION</b> summer semester - C	<b>credits: 2</b>
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The applications of biochemical mechanisms in the clinical practice, incl. the case reports: Dyslipidaemias, malnutrition - metabolic changes, diabetes mellitus. The assessment of energy sources available in Pen and EN - critically ill patients. Indirect ergometry. Organ specific substrates in treatment of shock, sepsis, multiorgan insufficiency, liver and renal insufficiencies. Management of geriatric patients.

<b>BASIS OF HARVESTING AND PRESERVATION OF TISSUES FOR TRANSPLANTATION</b> summer semester - C	<b>credits: 1</b>
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History of tissue banks, tissue donation - ethical and legal issues. Principles of preservation methods in cell and tissue banking. Safety assurance in tissue transplantations, contraindications of tissue harvests, laboratory testing of donors and processed tissue grafts. Principles of tissue engineering. Practical examples, demonstration of preservation methods, documentation. Cell cultures for clinical purposes, human milk bank - application of the system of Hazard Analysis and Critical Control Points.

<b>MYOSKELETAL MEDICINE</b> summer semester - C	<b>credits: 2</b>
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Dysfunction of movement system. Manual (myoskeletal) medicine. Analysis of movement dysfunction. Postisometric relaxation, manipulation, mobilisation, myofascial technique. Dysbalance of muscles and dysfunction.

## Elective subjects 5th year

<b>CLINICO-PATHOLOGICAL CONFERENCES</b> winter semester - C	<b>credits: 2</b>
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The subject comprises seven clinico-pathological conferences (CPCs) organized jointly by the Department of Pathology and the Department of Internal Medicine. Managed by both clinicians and pathologists, the students will actively discuss the clinical data (provided) and the differential diagnosis of cases of diseases of various body systems.

**CLINICAL SEXOLOGY****winter semester - C****credits: 1**

Clinical sexology as a medical field. History of medical sexology. Physiological and pathological human sexuality. Sexual dysfunctions. Paraphilias. Gender identity disorders.

**PRINCIPLES OF EMERGENCY AND CRITICAL CARE****winter semester - C****credits: 1**

Emergency and critical care: organisation, perspectives, relationship to other medical specialities. Critically ill patient: definition, most frequent clinical syndromes, monitoring. Airway management, venous access, acute respiratory failure, mechanical ventilation, shock syndromes, basic hemodynamic monitoring, trauma, trauma protocol, severe head injury, metabolic care, parenteral and enteral nutrition, renal failure, renal replacement therapy, ethical issues, brain death, organ donation, transplant programme.

**PSYCHOTHERAPY****summer semester - C****credits: 1**

History of psychotherapy. Psychotherapeutic methods. Verbal and nonverbal psychotherapeutic techniques. Psychodynamic psychotherapy. Cognitive behavioural psychotherapy.

**CLINICAL PHARMACOLOGY****summer semester - C****credits: 2**

Development of a new drug, clinical trials. Good laboratory and clinical practice. Therapeutic drug monitoring and its importance, individual prediction of dosage regimen. Problems in pharmacotherapy: adverse effects, toxic effects and drug interactions. Clinical pharmacology of drugs influencing hemostasis. Diabetes mellitus and its treatment. Antiasthmatics. Clinical pharmacology of drugs influencing the cardiovascular system. Chemotherapy. Clinical pharmacology of methotrexate. P-drugs, essential drugs, pharmacoeconomics. Evidence-based medicine.

**COMPUTER SOFTWARE FOR THE GENERAL PRACTICIONER****summer semester - C****credits: 2**

Introduction, medical resources on Internet, Medical informatics, Picture archiving and communication systems, Medical Information System Security, Electronic Signature on Electronic Patient Record, News in hardware and software for practitioner, Medical data design, Bibliographic databases, Internet, Powerpoint presentation.

**HEMATOLOGICAL PROBLEMS IN TROPICAL AND SUBTROPICAL AREAS****winter semester - C****credits: 1**

Hematological reference values in tropical areas. Structure and function of hemoglobin. Thalassemias: etiology, pathogenesis, genetic control and molecular basis of the thalassemias. Hemoglobinopathies associated with unstable hemoglobin. Anaemias. Hematological manifestations of malaria and other parasitic diseases. Disorders of coagulation and hemostasis in tropical areas.

**TRANSFUSION MEDICINE**  
**summer semester - C**

**credits: 1**

Basic principles of transfusion medicine. Blood donation - processing, storage and testing. Blood components. Autologous transfusion. Plasma derivatives. Blood transfusion in hospitals - complications and reactions. SOP for transfusion. Essential immunology for transfusion. Human blood group systems. Registry of bone marrow transplantation donors. Visit of blood centre. Simulation of transfusion and bed side test.