**SYLLABUS**

Educational cycle: academic year 2020/2021

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| **Name of a course/module** | **INTERNAL MEDICINE** |
| **Units providing a course** | 1. Department of Allergology and Internal Medicine
2. First Department of Lung Diseases and Tuberculosis
3. Second Department of Lung Diseases and Tuberculosis
4. Department of Endocrinology, Diabetology and Internal Medicine
5. Department of Gastroenterology and Internal Medicine
6. Department of Haematology
7. Department of Cardiology with ICCU (Intensive Cardiac Care Unit), Department of Invasive Cardiology
8. First Department of Nephrology and Transplantology with Dialysis Centre
9. Second Department of Nephrology and Hypertension with Dialysis Unit
10. Department of Rheumatology and Internal Medicine
11. Department of Internal Medicine and Metabolic Diseases
12. Department of Internal Medicine and Hypertension
13. Department of Medical Simulation
14. Specialist outpatient clinic
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| **E-mail addresses** | 1. alergol@umb.edu.pl
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| **Faculty** | Faculty of Medicine with Division of Dentistry and Division of Medical Education in English |
| **Field of study** | Medicine |
| **Level of education** | Uniform master’s degree studies |
| **Form of study** | full time  part time  |
| **Language of instruction** |  Polish  English  |
| **Type of (a) course** | obligatory  facultative |
| **Year of study/Semester** | I  II  III  IV V VI | 1  2  3  4  5 6 7 8 9 10 11  12 |
| **Introductory courses with preliminary requirements** | Implementation of learning outcomes in terms of knowledge, skills and competencies from the previous years. |
| **Number of didactic hours divided into forms of classes** | **3rd Year:**Total: 145 h, including: lectures – 37 h, seminars – 15 h, classes – 93 h;**4th Year:**Total: 130 h, including: lectures – 30 h, seminars – 30 h, classes – 70 h;**5th Year:**Total:150 h including: lectures – 34 h, seminars – 42 h, classes – 74 h;**6th Year:**Total: 240 h, including:60 h – seminars180 h – classes156 h in Internal Medicine Departments listed below according to the schedule1. Department of Allergology and Internal Medicine
2. First Department of Lung Diseases and Tuberculosis
3. Second Department of Lung Diseases and Tuberculosis
4. Department of Endocrinology, Diabetology and Internal Medicine
5. Department of Gastroenterology and Internal Medicine
6. Department of Haematology
7. Department of Cardiology with ICCU (Intensive Cardiac Care Unit), Department of Invasive Cardiology
8. First Department of Nephrology and Transplantology with Dialysis Centre
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10. Department of Rheumatology and Internal Medicine
11. Department of Internal Medicine and Metabolic Diseases
12. Department of Internal Medicine and Hypertension

6 h – in the Department of Medical Simulation (according to the schedule)(+ 180 h – classes in 6th Year as a selected clinical course) |
| **Assumptions and aims****of the course** | **Each student should acquire knowledge of** performing a physical examination, prophylactic procedures in selected diseases, carrying out the medical records of the patient; student should know and understand the causes, symptoms, principles of diagnosis and therapeutic treatment with respect to the most common internal diseases affecting adults, and their complications, basics of electrocardiology.The student should learn about:* pathogenesis and genetic, environmental and epidemiological determinants of selected allergic diseases and lung diseases, principles of treatment and prophylactic strategies in selected allergic and lung diseases.
* pathogenesis and genetic, environmental and epidemiological determinants of selected diseases of the gastrointestinal tract, principles of treatment in diseases of the gastrointestinal tract and prophylactic strategies in selected diseases of the gastrointestinal tract
* pathogenesis and genetic, environmental and epidemiological determinants of selected cardiovascular diseases, including: coronary heart disease, valve diseases, endocarditis, myocarditis, pericarditis, heart failure (acute and chronic), arterial and venous diseases, hypertension: primary and secondary, pulmonary hypertension,
* the criteria of diagnosis, pathogenesis and treatment of diabetes; clinical presentation and management of the hypothalamic-pituitary system diseases, thyroid, parathyroid and adrenal glands diseases and life threatening states in endocrinology and diabetology.
* describe and explain the anatomy and physiology of the kidneys and the pathophysiology of complex condition,, describe and explain epidemiology, etiology, and preventive care from the perspective of chronic and acute kidney dysfunction and different nephropathies with complex treatments of rapidly progressive glomerulopathies, assess and analyze the risk of acute and late complications in connections with haemodialysis and peritoneal dialysis, peritoneal dialysis and other extracorporeal treatments, describe the basics of kidney transplantation
* pathogenesis and genetic, environmental and epidemiological conditions of selected rheumatic diseases, the principles of treatment in diseases of the musculoskeletal system and prophylactic treatment in selected diseases of the musculoskeletal system.
* pathogenesis and genetic, environmental and epidemiological conditions of myelo- and lymphoproliferative diseases, blood therapy, transplantation (bone marrow transplants), disorders of haemostasis (thrombophilia, congenital and acquired haemorrhagic diatheses), non-malignant disorders of the white and red blood cell systems.

**The student should be able to:** independently carry out a full and targeted physical examination, write medical history.The student should be able to: plan and interpret results of extra medical examinations, determine the diagnosis and treatment in the field of Internal Medicine diseases and perform differentiation diagnosis. |
| **Didactic methods** | * providing knowledge in a form of lectures
* providing knowledge in a form of seminars
* providing knowledge regarding physical examination of the patient with student active participation.
* presentation of specialist endoscopic, ultrasound and radiology examinations.
* analysis of clinical cases in the form of medical history in written and oral form
* discussion
* presentation of clinical cases
* self-studying
* analysis of the literature
* practical classes
* practical classes with medical simulations
* consultations – according to information on the websites of individual Departments
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| **Full name of the person conducting the course** | Academic staff employed at:1. Department of Allergology and Internal Medicine
2. First Department of Lung Diseases and Tuberculosis
3. Second Department of Lung Diseases and Tuberculosis
4. Department of Endocrinology, Diabetology and Internal Medicine
5. Department of Gastroenterology and Internal Medicine
6. Department of Haematology
7. Department of Cardiology with ICCU (Intensive Cardiac Care Unit), Department of Invasive Cardiology
8. First Department of Nephrology and Transplantology with Dialysis Centre
9. Second Department of Nephrology and Hypertension with Dialysis Unit
10. Department of Rheumatology and Internal Medicine
11. Department of Internal Medicine and Metabolic Diseases
12. Department of Internal Medicine and Hypertension
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| **Full name of the person responsible for teaching** | Coordinator of Internal Medicine – Professor Agnieszka TycińskaDepartment of Allergology and Internal Diseases: Professor Marcin Moniuszko, Dr Roman SkiepkoFirst Department of Lung Diseases and Tuberculosis: Dr Beata Panek-PenpickaSecond Department of Lung Diseases and Tuberculosis: Dr Łukasz MinarowskiDepartment of Endocrinology, Diabetology and Internal Medicine: Assoc. Prof. Agnieszka AdamskaDepartment of Gastroenterology and Internal Medicine:Assoc. Prof. Jarosław DanilukDepartment of Haematology: Assoc. Prof. Jarosław PiszczDepartment of Cardiology: Assoc. Prof. Anna Szpakowicz; English Division: Professor Anna Tomaszuk-KazberukDepartment of Invasive Cardiology: Dr Małgorzata Zalewska-AdamiecFirst Department of Nephrology and Transplantology with Dialysis Centre: Dr Katarzyna KlejnaSecond Department of Nephrology and Hypertension with Dialysis Unit: Professor Tomasz HryszkoDepartment of Rheumatology and Internal Medicine: Dr Ewa Gińdzieńska-SieśkiewiczDepartment of Internal Medicine and Metabolic Diseases: Professor Irina KowalskaDepartment of Internal Medicine and Hypertension: Assoc Prof. Edyta ZbrochDepartment of Medical Simulation: Professor Włodzimierz Łuczyński |

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| **Symbol and number of learning outcomes according to the teaching standards and other learning outcomes** | **Description of learning outcomes** | **Form of classes** | **Verification methods for achieving intended learning outcomes** |
| **Knowledge** |
| EW 1. | knows environmental and epidemiological determinants of individual diseases of Internal Medicine | LecturesSeminarsClassesPractical solution of clinical problems | Summarizing methods:-written exam (test-MCQ)Forming Methods:-observation of the student’s work-evaluation of the activity in the classroom-discussion during classes-case description-written test |
| EW 7**.** | knows and understands the causes, symptoms and principles of diagnosis and therapeutic treatment with respect to the most common internal diseases affecting adults and their complications:1. cardiovascular diseases, including: coronary artery disease, valve diseases, endocarditis, myocarditis, pericarditis, heart failure (acute and chronic), arterial and venous diseases, hypertension: primary and secondary, pulmonary hypertension,
2. respiratory system diseases, including: respiratory tract diseases, chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, cystic fibrosis, respiratory infections, interstitial lung disease, diseases of the pleura, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory tract malignancies,
3. gastrointestinal diseases, including oral, oesophageal, gastric and duodenal diseases, diseases of the pancreas, liver, bile ducts and gall bladder,
4. diseases of the internal secretion system, including hypothalamic and pituitary diseases, diseases of the thyroid, parathyroid, cortex and adrenal glands, ovaries and testes, neuroendocrine tumours, polyendocrine syndromes, various types of diabetes and metabolic syndrome: hypoglycaemia, obesity, dyslipidemia,
5. kidney and urinary tract diseases, including: acute and chronic renal failure, glomeruloneal renal and interstitial kidney diseases, renal cysts, renal calculus, urinary tract infections, urinary tract cancer, especially bladder cancer and renal cancer
6. hematopoietic diseases, including: bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukaemia, myeloproliferative, myeloproliferative and myeloproliferative cancers, myelodysplastic syndromes, mature B and T lymphocytes malignancies, diatheses, thrombophilia, life-threatening conditions in haematology, blood disorders in diseases of other organs,
7. rheumatic diseases, including: connective tissue diseases, systemic vasculitis, spondylitis, bone metabolic diseases, especially osteoporosis and osteoarthritis, gout,
8. allergic diseases, including: anaphylaxis and anaphylactic shock, angioedema,
9. hydro-electrolyte and acid-base disorders: dehydration, over hydration, electrolyte disturbances, acidosis and alkalosis.
 | LecturesSeminarsClassesPractical solution of clinical problems |
| **Skills** |
| EU1. | takes medical history from an adult patient; | ClassesPractical solution of clinical problems | Summarizing methods:- practical exam- implementation of a specific task- presentationForming methods, e.g.:- observation of student work- preliminary test- evaluation of the student activity during classes- discussion during classes- case description- written test |
| EU3. | carries out a full and targeted physical examination of an adult patient; | as above |
| EU7. | evaluates the general condition, state of consciousness and awareness of the patient; | as above |
| EU10. | evaluates the stage of puberty; | as above |
| EU12. | performs differential diagnosis of the most common illnesses | as above |
| EU13. | assesses and describes the patient's somatic and psychological state; | as above |
| EU14. | recognizes the states of immediate danger to life; | as above |
| EU16. | plans diagnostic, therapeutic and prophylactic procedures | as above |
| EU17. | analyses possible side effects of drugs and the interaction between them | as above |
| EU18. | proposes individualization of existing therapeutic guidelines and other treatments for ineffectiveness or contraindications to standard therapy; | as above |
| EU21. | defines states in which life expectancy, functional status, or patient preferences limit behaviour according to disease guidelines; | as above |
| EU24. | interprets results of laboratory tests and identifies causes of abnormalities; | as above |
| EU25. | uses nutritional treatment (including enteral and parenteral nutrition); | as above |
| EU29. | performs basic procedures and medical treatments, including1. body temperature, pulse, non-invasive blood pressure measurement,
2. monitoring of vital signs with cardiomonitor, pulse oximetry,
3. spirometry, oxygen therapy, assisted and replacement ventilation
4. inserting an intubation tube,
5. intravenous, intramuscular and subcutaneous injection, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood sampling
6. nasal, throat and skin swabbing, puncture of the pleural cavity
7. catheterization of the bladder in men and women, gastric aspiration, gastric lavage, enema,,
8. standard resting electrocardiogram with interpretation, electrical cardioversion and defibrillation
9. electrical cardioversion and heart's defibrillation
10. simple strip tests
11. tests and measurement of blood glucose;
 | as above |
| EU30. | supports the following procedures and medical treatments:1. transfusion of blood and blood products,
2. drainage of the pleural cavity,
3. puncture of the pericardial cavity,
4. puncture of the peritoneal cavity,
5. lumbar puncture,
6. fine needle biopsy,
7. epidermal tests, intradermal and scarification tests and interpreting their results
 | as above |
| EU32. | plans specialist consultations | as above |
| EU38. | carries out the medical records of the patient | as above |  |
| **Social competences** |
| K1 | respects medical confidentiality and patient’s rights | Classes | Summarizing methods, e.g.:- continuous assessment by teachers (observation)Forming methods, e.g.:- observation of student work- discussion during classes- opinions of patients, colleagues |
| K2 | is able to establish and maintain a deep and respectful contact with the patient as well as to show understanding of world and cultural differences |
| K3 | is guided by the patient's well-being |  |
| K4 | recognizes his own diagnostic and therapeutic limitations and self-evaluates deficits and educational needs |  |
| K5 | undertakes action in relation to a patient according to ethical principles and being aware of social conditions and limitations resulting from a disease |  |
| K6 | promotes pro-healthy behaviour |  |
| K7 | uses objective sources of information |  |
| K8 | formulates conclusions from own measurements or observations |  |
| K9 | implements the principles of professional colleagueship and cooperation in a team of specialists, including representatives of other medical professions, also in multicultural and multinational environment |  |
| K10 | formulates opinions concerning various aspects of professional activity |  |
| K11 | accepts responsibility for decisions made in the course of professional activity, including his own and other people’s safety |  |

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|  **ECTS** | 9+6+6+16 |
| **Student Workload** |
| **Form of activity** | **Number of hours to complete the activity** |
| **Classes that require the participation of a teacher** |
| 1. Realization of the course: lectures (according to the curriculum)
 | 101 |
| 1. Realization of the course: classes (according to the curriculum)
 | 480 |
| 1. Realization of the course: seminars (according to the curriculum)
 | 87 |
| 1. Realization of the course: electives
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| 1. Participation in consultation (office hours)
 | 10 |
|  | Hours in total: 678 |
| **Student self-study:** |
| 1. Preparation for theoretical and practical classes (realization of the project, documentation, case study, etc.)
 | 165 |
| 1. Preparation to tests and assignments
 | 90 |
| 1. Preparation for an exam/final test-credit
 | 30 |
|  | Hours in total: 285 |

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| **Course contents:** |
| **INTRODUCTION TO INTERNAL MEDICINE – 3RD YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | **LECTURES**A strategy of history taking and presenting complaints related to the respiratory system.Cardiovascular complaints.Gastrointestinal complaints.Renal, reproductive and musculoskeletal complaints.General examination.Examination of the head and neck.Examination of the respiratory system.Examination of the cardiovascular system.Examination of the abdomen.Examination of the renal, reproductive and musculoskeletal system.Respiratory diseases.Cardiovascular diseases.Gastrointestinal diseasesDiseases of the endocrine system.Peripheral vascular diseases.Anaemia and haemorrhagic flaws.Hematopoietic proliferative diseases.Renal and osteoarticular diseases.CLASSES1. The interview and history taking strategy.
2. Common symptoms.
3. Symptoms of the cardiovascular and respiratory system diseases.
4. Symptoms of the gastrointestinal system diseases
5. Symptoms of the renal, reproductive and musculoskeletal system diseases.
6. General examination. Examination of the head and neck.
7. General examination of the chest, examination of the respiratory system.
8. Examination of the heart and peripheral vessels.
9. General examination of the abdomen, examination of the liver. Examination of the spleen, intestines, *per rectum* examination.
10. Examination of the renal and reproductive system.
11. Examination of the musculoskeletal system.
12. Student independent preparation of clinical history – interview and physical examination, suggesting initial diagnosis, suggesting additional examinations, patient observation, differentiation and treatment.
13. Basic electrocardiography, demonstration of typical ECG curves in myocardial infarction, arrhythmias and conduction disorders.
14. Demonstration of clinical cases with particular emphasis on changes in a physical examination.
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| **INTERNAL MEDICINE – ALERGOLOGY – 3RD YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U28E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | 1. Respiratory function tests (spirometry, provocation tests). (L, S, C)
2. Allergy diagnostics (allergy tests, immunological diagnosis). (L, S, C)
3. Cough and dyspnoea – main symptoms from respiratory tract. (S, C)
4. Allergy markers in hematopoietic system disorders. (S, C)
5. Allergic and non-allergic asthma, other asthma phenotypes. (L, S, C)
6. Life threatening states caused by allergic reactions: anaphylactic shock, allergic reactions after insect stinging, angioedema. (L, S, C)
7. Non-invasive diagnostics for inflammation in respiratory tract diseases. (C)
8. Practical performance of diagnostics tests used in lung obstructive diseases and allergy-mediated diseases. (C)
9. Coexistence of asthma and chronic obstructive pulmonary disease. (C)
10. Acute and chronic urticaria, coexistence of urticaria and angioedema. (C)
11. Allergic rhinitis and allergic conjunctivitis. (C)
12. Atopic dermatitis. (C)
13. Contact dermatitis. (C)
14. Adverse drug reactions. (C)
15. Occupational allergies. (C)
16. Hypersensitivity pneumonitis. (C)
17. Eosinophilic bronchitis. (C)
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| **INTERNAL MEDICINE – PULMONOLOGY 3RD YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U24.E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | **LECTURES**1. Chronic obstructive pulmonary disease – etiopathogenesis, symptomatology, diagnostics and treatment (2x45min)
2. Pneumonia – etiology, symptoms, diagnostics and treatment (2x45min)
3. Lung cancers – etiology, symptoms, diagnostics and treatment (2x45min)
4. Interstitial lung diseases – etiology, symptoms, diagnostics and treatment (2x45min)
5. Tuberculosis (3x45min)

**SEMINARS & CLASSES**1. Physical examination of the respiratory system including special states (lung oedema, atelectasis, pneumothorax, abscess, emphysema)
2. Pulmonary function tests. Classes in the laboratory of spirometry and plethysmography (spirometry, plethysmography, DLCO)
3. Chronic Obstructive Pulmonary Disease (COPD)
4. Pneumonia, methods of taking test material, case study
5. Fluid in pleural cavity, emphysema, participation in thoracocentesis
6. Lung cancer, paraneoplasmatic syndromes, assisting in bronchoscopy, chest radiograms reporting
7. Selected interstitial diseases (sarcoidosis, HP, interstitial lung fibrosis), radiological diagnostics, discussion of BAL and induced sputum examination
8. Chronic respiratory failure, ABH reporting
9. Lung tuberculosis, chest radiograms reporting
10. Final credit test administered in each group after classes completion
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| **INTERNAL MEDICINE – CARDIOLOGY – 4TH YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | LECTURES1. Introductory lecture. Cardiovascular diseases. Epidemics of the 21st century. (45 min)

The importance of non-invasive tests in the diagnosis of heart disease (45min)1. Invasive methods of diagnosis and therapy of cardiovascular diseases (2 x 45 min)
2. Acute conditions in cardiology (2 x 45 min)
3. Acquired heart valve diseases. Division, pharmacological treatment. Indications for invasive treatment (2 x 45 min)
4. Congenital heart defects in adults. Diagnosis and treatment. Indications for interventional treatment (45 min). Atrial fibrillation from theory to practice (45 min)
5. Classification and diagnosis of hypertension (45 min). Treatment of hypertension (45 min)
6. Infective endocarditis (45 min). Myocarditis, cardiomyopathies (45 min)

SEMINARS & CLASSES1. Normal electrocardiogram; examples of ECG records
2. Arrhythmias
3. Conductibility disorders
4. Angina pectoris stable and unstable
5. Myocardial infarction.
6. Electrotherapy of arrhythmias and conductibility disorders
7. Heart failure
8. Prevention of diseases of the cardiovascular system.
9. Examination
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| **INTERNAL MEDICINE – GASTROLOGY – 4TH YEAR** |
| **Learning outcomes (symbol and number)** | Topics |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U24E.U25E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | LECTURES1. Gastroesophageal reflux disease
2. Peptic ulcer disease
3. Acute pancreatitis
4. Chronic pancreatitis

SEMINARS1. Liver cirrhosis

2. Gastric cancer3. Gastrointestinal bleeding4. Colorectal cancer5. Pancreatic cancer6. Ulcerative colitis7. Crohn’s diseaseCLASSESI. Medical history and physical examination skills assessment related to internal diseasesII. Topics: 1. Signs and symptoms of gastrointestinal diseases.
2. Peptic ulcer disease – diagnosis and treatment.
3. Non-alcoholic fatty liver disease and alcoholic liver diseases.
4. Choledocholithiasis – diagnosis and treatment.
5. Acute pancreatitis – pathogenesis, clinical manifestations and treatment.
6. Chronic pancreatitis.
7. Diverticular disease.

III. Written exam on gastroenterology (based on topics covered during lectures and classes).IV. Final credit test. |
| **INTERNAL MEDICINE – ENDOCRINOLOGY AND DIABETOLOGY – 5TH YEAR** |
| **Learning outcomes****(symbol and number)** | **Topics** |
| E.W7.E.U12E.U16.E.W1.E.U24.E.W1.E.U32.E. U30K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | LECTURES1. Regulation and mechanisms of hormone secretion.
2. Diseases of the pituitary gland.
3. Pathogenesis, diagnosis and treatment of thyroid diseases.
4. Pathogenesis, diagnostics and treatment of adrenal diseases.
5. Regulation of calcium-phosphate homeostasis.
6. Obesity and its consequences.
7. Pathogenesis, diagnosis and treatment of type 1 diabetes.
8. Pathogenesis, diagnosis and treatment of type 2 diabetes.

SEMINARS & CLASESS1. Clinical picture, management and differential diagnosis in adrenal diseases – part I/II. (S/C)
2. Clinical picture, diagnostics and management of diseases of the hypothalamic-pituitary system. (S/C)
3. Clinical picture, diagnostics and management of thyroid diseases – part I/II. (S)
4. Thyroid ultrasound presentation and fine needle aspiration biopsy (FNA) of the thyroid gland. (C)
5. Diagnostic criteria and glucose control for diabetes mellitus. (S/C)
6. Non-pharmacological and pharmacological treatment of type 2 diabetes. (S/C)
7. Practical insulin therapy – insulin therapy algorithms, presentation of insulin pens, insulin pumps and glucometers – part I/II. (S/C)
8. Discussion of endocrine diseases based on selected clinical cases. (C)
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| **INTERNAL MEDICINE – NEPHROLOGY – 5TH YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U12E.U16E.U17E.U18E.U24E.U29E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | LECTURES1. Diagnostics of kidney diseases
2. Glomerular diseases
3. Acute kidney injury
4. Interstitial kidney diseases
5. Kidneys and arterial hypertension

SEMINARS & CLASSES1. Acid-alkaline and water-electrolyte disorders in nephrology
2. Chronic Kidney Disease (CKD)
* causes, symptoms, clinical/physical examination, investigations
* complications of CKD
* management of CKD, renoprotection
1. Acute kidney injury (AKI)
* prerenal, renal, postrenal
* acute cortical necrosis
* contrast nephropathy
* hepatorenal syndrome
1. Glomerular Diseases
* nephrotic syndrome
* nephritic syndrome
* rapidly progressive glomerulonephritis (RPGN)
1. Renal Replacement Therapy
* hemodialysis
* peritoneal dialysis
* continuous methods
1. Tubulo-interstitial nephritis
* urinary tract infection
* kidney and hypertension
1. Kidney transplantation
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| **INTERNAL MEDICINE – HEMATOLOGY – 5TH YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U24E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11 | LECTURES1. Anaemia – diagnostics, treatment.
2. Non-Hodgkin's lymphomas – diagnostics, treatment.
3. Acute leukemia – diagnostics, treatment.
4. Congenital and acquired coagulation disorders.
5. Myeloproliferative diseases – diagnostics, treatment.

SEMINARS & CLASSES1. Multiple myeloma.
2. Non-Hodgkin's lymphomas.
3. Acute leukemia: myeloid and lymphoblastic.
4. Myeloproliferative diseases: chronic myeloid leukemia, polycythemia vera, essential thrombocythosis, idiopathic myelofibrosis.
5. Anaemias.
6. Haemorrhagic diathesis: vascular, plasmatic, and thrombocythopenic.
7. Venous thromboembolism.
8. Anticoagulant, thrombolytic, antiplatelet therapy.
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| **INTERNAL MEDICINE – RHEUMATOLOGY – 5TH YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
| E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U24E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11  |

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| LECTURES |
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| 1. Introduction to rheumatology- epidemiology of rheumatic diseases- etiopathogenesis of rheumatic diseases- symptomatology of rheumatic diseases- general rules of the treatment of rheumatic diseases2. Chronic arthritis- peripheral arthritis- axial arthritis- other forms of RA- Lyme’s disease3. Reactive and non-infectious arthritis4. Metabolic arthritis |

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SEMINARS & CLASESS1. Examination of the musculoskeletal system.
2. General characteristics of rheumatic diseases. Clinical-physical picture. Implications of pathogenic changes in the clinical picture.
3. Osteoarthritis. Clinical picture, physical examination, diagnosis, differentiation, prognosis, treatment.
4. Gout, chronic arthritis. Clinical examination, diagnosis, differentiation, prognosis, treatment.
5. Osteoporosis. Clinical examination, diagnosis, differentiation, prognosis
6. Chronic arthritis: Rheumatoid arthritis, Seronegative axial arthritis. Diagnosis, differentiation, therapeutic treatment.
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| **INTERNAL MEDICINE – 6TH YEAR** |
| **Learning outcomes (symbol and number)** | **Topics** |
|  E.W1E.W7E.U1E.U3E.U7E.U12E.U14E.U16E.U17E.U18E.U21E.U29E.U30E.U32E.U38K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11E.W7,E.U1, E.U3, E.U7, E.U12, E.U13, E.U14, E.U16, E.U24,E.U29, E.U32, E.U38 | Diagnosis and treatment in internal medicine – classes at Internist Clinics according to the schedule between 8.00-11.001. Patient with dyspnoea – diagnosis and treatment
2. Differential diagnosis of edema
3. Abdominal pains - diagnosis and treatment
4. Chest pains – diagnosis and treatment
5. Patient with fever of unknown origin – differential diagnosis
6. A patient with diarrhea – differential diagnosis and treatment
7. Patient with anaemia – differential diagnosis and treatment

Practical solution of clinical problems – classes according to the schedule between 11.30-13.00ALLERGOLOGY1. Diagnostic problems in chronic urticaria
2. Life threatening states in allergology (anaphylactic shock, angioedema)
3. Diagnostic and therapeutic procedures in patients with severe and difficult asthma
4. Hymenoptera and non-hymenoptera venoms allergy

PULMONOLOGY1. Diagnostic and treatment difficulties in interstitial diseases, in particular interstitial pneumonia and differentiation between sarcoidosis and HP.
2. Recurrent infection of lower airways.
3. Circulatory decompensation and arrhythmias as complications in pneumonology.
4. Non-invasive mechanical ventilation in the treatment of chronic respiratory insufficiency and its exacerbation.
5. Circular shadows in lungs in the chest radiological examination as a diagnostics problem.
6. Shift in the clinical picture of tuberculosis in recent decades and latent tuberculosis.
7. Sleep breathing disorders.

CARDIOLOGY1. Acute and chronic heart failure.
2. Hypertension.
3. Infective endocarditis.
4. Acquired heart valve defects.
5. Electrotherapy of heart diseases.
6. Invasive treatment of heart diseases.

GASTROENTEROLOGY1. Causes and treatment strategies of dysphagia in terms of selected disease units.
2. Analysis of endoscopic images of the gastrointestinal tract with regard to certain clinical cases.
3. Anaemia induced by gastrointestinal disorders – analysis of clinical cases.
4. Common causes, diagnostics and treatment of intra- and extrahepatic cholestasis.
5. Clinical manifestations of portal hypertension based on specific clinical cases (ascites, SBP, hepatorenal syndrome).
6. Altered bowel habits in selected clinical conditions (diverticulosis, IBD, IBS).

ENDOCRINOLOGY AND DIABETOLOGY1. Thyroiditis.
2. Thyroid cancer.
3. Life threatening states in endocrinology
4. Acute complications of diabetes.
5. Thyroid orbitopathy

NEPHROLOGY1. Cardio-renal syndrome.
2. Diabetic kidney disease.
3. Monoclonal gammopathy of renal significance (MGRS).
4. Lupus nephritis.
5. Polycystic kidney disease.
6. Haemolytic-uremic syndrome.

HEMATOLOGY1. Differential diagnosis of anaemia.
2. Thrombophilia as an interdisciplinary problem.
3. Suspicion of the proliferative disease – management of the patient.

RHEUMATOLOGY1. Systemic sclerosis and scleroderma-like syndromes
2. Systemic lupus erythematosus – symptoms, complications, diagnostics, treatment
3. Systemic vasculitis-picture of multiorgan diseases
4. Polymialgia rheumacica and differential diagnosis of fevers of unknown origin
5. Treatment of patients with chronic arthritis refractory to standard therapies
6. Unusual forms of arthritis-Still's disease in adults
7. Sjögren's syndrome
8. Polymyositis and dermatomyositis

METABOLIC DISEASES1. Eating disorders – anorexia nervosa, bulimia
2. Obesity – clinical aspects
3. Diagnosis and treatment of dyslipidemia

DEPARTMENT OF MEDICAL SIMULATIONS – 6TH YEAR OF MEDICAL FACULTY1. Acute pancreatitis. Cholelithiasis.
2. Acidosis and ketone coma.
3. Anaphylaxis and anaphylactic shock.
4. Loss of consciousness.
5. Myelosuppression and neutropenic fever.
6. Sepsis and septic shock.
7. Poisonings.

Practical classes are held in the form of high-fidelity medical simulation scenarios in internal medicine with the use of simulators. Students act as members of a multidisciplinary team taking care of the patient. Afterwards, students and their teacher discuss the procedure and draw educational conclusions. Each class consists of a test checking student knowledge, scenario implementation and discussion. |

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| **Obligatory textbook:** |
| Textbooks necessary to acquire basic knowledge of the course:- Harrison’s Internal Medicine- Macleod’s Clinical Examination |
| **Supplementary literature:** |
| Bates's Guide to Physical Examination and History taking |

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| **Criteria for assessing the learning outcomes achieved and the form and conditions for obtaining the credit for the course:** |
| **3RD-6 year**1. Method of passing individual classes – oral (discussion during classes, observation of student work, assessment of activity during classes).
2. Method of passing individual seminars – oral.
3. Method and form of completing all didactic classes in a particular unit – a written test (multiple choice test) and passing the history of the disease (implementation of a specific task, multimedia presentation).
4. The block begins with checking the knowledge of physical examination in the field of Internal Medicine – a form of checking at discretion of the Departments.
5. Preparation to classes is assessed on the ground of active participation in the class (analysis of clinical cases under discussion).
6. Preparation of the medical history during the block of classes.
7. Credit of seminars – based on discussion and participation in the seminar.
8. At the end of the block there is a test of knowledge following the curriculum (the subject matter covers seminars, classes and lectures). The most common form of checking knowledge is a test. In case of failure – a retake test within 14 days after finishing the block.

Absence not confirmed by the sick note – the obligation to make up for the classes after consultation with the teacher. Only the students who participate in all classes can pass the classes. The classes may be made up for if the absences cover less than 30% of the classes.**6th year**The requirement for receiving credit for Internal Medicine course is:1. Participation in all courses (classes and practical solutions of clinical problems). A student may have one excused absence in the **classes** in a semester (a sick note or Dean’s consent). More absences in the classes require taking up classes with another group. Absence in the classes on ”**practical solutions of clinical problems”** requires taking up classes with another group or taking a credit with the teacher.
2. Written test.

**Rules for the examination in Internal Medicine****A. Initial arrangements**1. Internal Medicine exam on the 6**th** year consists of three parts: a written test, practical and oral exam. Passing a test is necessary to take other parts of the exam.
2. The requirement for passing the Internal Medicine exam is to obtain a positive grade for each part of the exam (a test, and practical and oral exam).
3. The exam consists of two parts: a test (50%) and a practical and oral exam (50%). The total grade consists of the average of these two parts.

**B. Test exam**1. The test exam consists of 100 questions and lasts 150 minutes**.**
2. Test questions cover all blocks from Internal Medicine according to the syllabus of Internal Medicine for the years III-VI.
3. Students must take the test by themselves. Contacting other people during the test as well as all forms of using unauthorized support materials, multimedia, mobile phones and electronic means of communication (e.g. smartphones, smartwatches) will result in termination of the test at the moment of the regulations’ violation, which may also result in disqualification of the student taking the exam. Disqualification is equal to an unsatisfactory mark for the test exam.
4. Question sets are prepared in a way that guarantees objectivity and a convenient pursuit of the exam; they are arranged in such a way that students sitting next to each other have a different order of questions or distractors.
5. Passing the exam means a positive results if the student taking the exam gets at least 60% correct answers (i.e. 60 points). Receiving less than 60 points (i.e. 59 and less) means failing the entire exam, i.e. an unsatisfactory mark in the first term.
6. The test exam can be taken three times.
7. The results of test are available and presented no later than 1 working day from the date of the examination. In the announcement of the test results and all information related to the marks, all standard rules for the protection of personal data are guaranteed.
8. Points and grading system of the test exam are based on the following criteria:
	1. <60 failed (2)
	2. 60-67 satisfactory (3)
	3. 68-75 fairly good (3,5)
	4. 76-83 good (4)
	5. 84-92 better than good (4,5)
	6. 93-100 very good (5)

**C. Practical exam and oral exam**1. The place of taking oral exams in Internal Medicine and the examiner's name is determined by drawing lots; these data are made available to students ahead of the date of the test.
2. Practical exam and oral exam, constituting an integral part of the Internal Medicine exam, take place after obtaining a positive result of the test. The student receives one mark for the practical and oral exam.
3. The practical and oral examination can take place after the test exam on the next working day; the examination starts at 08:00 A.M.
4. Passing the practical exam requires correct recognition of the so-called "passing diagnoses" in all three electrocardiograms (standardized descriptions for all Departments).
5. Failure of the practical part means that the exam must be retaken (the test remains passed). The practical exam can be taken three times.
6. The oral exam is carried out by the Head of the Department (and/or a second person designated by the Head of the Department – an individual decision made by the Head of the Department). A signature in the student record book (index), examination card and/or the electronic protocol is made by persons conducting the oral examination.
7. The oral exam involves giving correct answers to 3 questions asked (including those based on the differential diagnosis which is a continuation of the practical exam).
8. There are two retake exams (in accordance with the Study Regulations) for the entire exam (not for individual parts). A correction of any stage of the Internal Medicine examination is considered a retake examination.
9. The final grade in Internal Medicine exam consists of the average of the results obtained for each part of the exam.

**D. Retake exam**A retake exam will be carried out in the same way as the exam in the first term.Exemption from the exam is not applicable. |

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*(date and signature of the Head of the Unit providing the course or the Course Coordinator)*