



48SJ-INM88

ECTS: 10

YEAR: 2025L

INTERNAL MEDICINE 8/8

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**COURSE CONTENT CLASSES**

Nephrology (32h - 4 days x 8h 08.00-14.30): 1. Patient with non-infectious complications of hemodialysis. Patient with vascular access complications 2. Ultrasound and other imaging techniques in kidney disease. Preparing patient with CKD prepared for examination with contrast administration. Principles of nephroprotection in imaging studies. Risk factors, symptoms and treatment of contrast nephropathy. 3. Patient with complicated and resistant hypertension. Diagnosis of organ damage in hypertension. 4. Special situations in hypertension: pregnancy, hypertensive crisis, perioperative period. 5. Geriatric nephrology - renal problems in the elderly. 6. Peritoneal dialysis: access to the peritoneal cavity, fluids in peritoneal dialysis, infectious and non-infectious peritoneal dialysis (PD) complications. Long-term PD results and their comparison with HD. 7. Patient with infectious complications of hemodialysis. Patient with peritoneal dialysis-related peritonitis. Endocrinology (26h - 3 days x 8.6h 07: 30-14.45): 1. Treatment of diabetes (type 1 and type 2), diabetes with known etiology, gestational diabetes. 2. Criteria of metabolic control in diabetes. Long-term monitoring. 3. Nutritional treatment in diabetes. 4. Physical effort - principles of using exercise in diabetes, depending on the treatment methods. 5. Oral antidiabetic drugs: biguanide derivatives, sulfonylureas, α-glucosidase inhibitors, DPP-4 inhibitors, GLP-1 receptor agonists. 6. Assessment of metabolic control of a diabetic patient. Analysis of nutritional treatment. Activity evaluation. Planning therapy of the patient. 7. Insulin therapy. 8. Hypoglycemia - symptoms, diagnosis and treatment, assessment of the incidence. Reasons of hypoglycemia. 9. Ketoacidosis and non-ketone hyperosmolar hyperglycemia: reasons, diagnosis and proposed treatment. 10. Osteoporosis and neuroendocrine tumors. 11. Adrenal gland incidentaloma - imaging and hormonal diagnostics. Adrenal gland cancer. Multiple endocrine neoplasia. Hyperparathyroidism and hypoparathyroidism. 12. Water-electrolyte and acid-base disorders: dehydration, overhydration, hyponatraemia, hypernatremia, hypokalemia, hyperkalemia, hypomagnesemia, hypermagnesemia, hypocalcaemia, hypercalcemia, hypophosphataemia, hyperphosphataemia; acidosis, alkalosis. 13. Bone metabolic diseases: osteomalacia, osteoporosis - determinants of peak bone mass, diagnosis of osteoporosis (clinical and skeletal risk factors. FRAX); primary and secondary osteoporosis; prevention and treatment of osteoporosis. 14. Hormonal gonadal dysfunction: Ovaries - menstrual disorders (primary and secondary amenorrhea), polycystic ovary syndrome, ovarian tumors, perimenopausal and postmenopausal disorders; Testicles - testicular disorders (cryptorchidism, primary and secondary hormonal testicular failure, seminiferous tubule failure), testicular cancer, gynecomastia. Gastroenterology / Hepatology (30h - 5 days x 6h 08.00-13.00): 1. Constipation and colon cancer. 2. Diarrhea and irritable bowel syndrome. 3. Diverticular disease. 4. Autoimmune bowel diseases. 5. Malabsorption syndromes. 6. Diarrhea, constipation - diagnosis, differentiation, treatment. 7. Demonstrations of procedures: varicose ligation, nutritional gastrostomy, intrahepatic pressure gradient measurements, polypectomy in the large intestine and stomach. 8. Demonstrations and discussions of classical radiological tests in various digestive tract pathologies. 9. Clinical consequences of digestion and absorption processing, and inadequate and applied nutrition. 10. Primary and metastatic cancers of the digestive system. Hepatology 1. Inflammation and liver disease: viral, metabolic, toxic and autoimmune. 2. Cholestasis, biliary and gallbladder pathologies, liver and biliary tract cancer. 3. Etiopathogenesis, diagnosis and treatment of acute and chronic liver failure. 4. Patient with liver pathologies - management. 5. Pathologies of intra- and extrahepatic bile ducts. 6. Liver in various pathologies and metabolic disorders - clinical implications. 7. Patient with liver failure - management. 8. Nutrition principles for patients with liver pathologies - diet selection exercises. Cardiology (50h - 6 days x 8h 08.00-14.30): 1. Acute myocarditis. 2. Sudden cardiac arrest. 3. Basics of arrhythmias' differentiation. 4. Syncope - diagnosis and treatment. 5. Conductivity disorders. 6. Long-term ECG recordings. 7. Indications for ICD. 8. Invasive treatment of supraventricular tachycardias. 9. Direct current cardioversion. Rheumatology (12h - 2 days x 6h 08.00-13.00): 1. Taking history and physical examination in rheumatology. Interpretation of diagnostic test results. Rheumatoid arthritis. 2. Seronegative spondyloarthropathies; vascular degenerative disease; gout and other crystallopathies, osteoporosis. 3. Physiotherapy in rheumatic diseases, systemic connective tissue diseases: systemic lupus erythematosus, systemic scleroderma, dermatomyositis, polymyalgia rheumatica.

**LECTURES**

No lectures.

**EDUCATIONAL OBJECTIVE:**

Etiology, pathophysiology, epidemiology, diagnosis and treatment of respiratory diseases, allergies, diseases metabolic, heart and hematopoietic diseases.

**DESCRIPTION OF LEARNING OUTCOMES FOR THE COURSE IN RELATION TO FIELD AND MAJOR LEARNING OUTCOMES**

Codes of learning outcomes in a major field of study:	M/NM+++ , M/NMA_P7S_KO+,
Codes of learning outcomes in a major area of study:	E.U1.+ , E.U13.+ , E.U14.+ , E.U16.+ , E.U17.+ , E.U24.+ , E.U28.+ , E.U29.+ , E.U3.+ , E.U30.+ , E.U32.+ , E.W1.+ , E.W40.+ , E.W41.+ , E.W42.+ , E.W7.+ , K.1.+ , K.2.+ , K.3.+ , K.5.+ , KA7_KO1+,

**LEARNING OUTCOMES:**

**Knowledge**

W1 - The student knows the environmental and epidemiological conditions of the most common diseases.  
W2 - The student knows and understands etiology, signs, symptoms, principles of diagnosis and therapy of

<b>Course/module:</b>	
INTERNAL MEDICINE 8/8	
<b>Fields of education:</b>	
<b>Course status:</b>	mandatory
<b>Course group:</b>	B - przedmioty kierunkowe
<b>ECTS code:</b>	
<b>Field of study:</b>	Medicine
<b>Specialty area:</b>	Medicine
<b>Educational profile:</b>	General academic
<b>Form of study:</b>	full-time
<b>Level of study:</b>	uniform master's studies
<b>Year/semester:</b>	6 / 12
<b>Type of course:</b>	
Classes	
<b>Number of hours per semester/week:</b>	Classes: 150
<b>Teaching forms and methods</b>	
Classes(K1, K2, K3, K4, K5, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, W1, W2, W3, W4, W5) : test of practical skills at the patient's bed	
<b>Form and terms of the verification results:</b>	
CLASSES: Oral exam - Oral exam only after successfully passing the written test. (K4, W1, W2, W3, W4, W5) ; CLASSES: Written exam - Competency test - final test in all fields of the internal medicine, according to study program. 120 questions, pass threshold 60%. (K4, W1, W2, W3, W4, W5) ; CLASSES: Colloquium practical - Practical bedside exam covers all skills student should gain during internal medicine study program. A positive practical exam result is required for taking the written exam. (K1, K2, K3, K4, K5, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, W1, W2, W3, W4, W5)	
<b>Number of ECTS points:</b>	10
<b>Language of instruction:</b>	English
<b>Introductory courses:</b>	
Anatomy, Physiology, Pathophysiology, Internal Medicine - all previous semesters	
<b>Preliminary requirements:</b>	
Knowledge of anatomy, physiology, human pathophysiology, knowledge of internal diseases - all previous semesters	
<b>Name of the organizational unit offering the course:</b>	
Katedra Kardiologii i Chorób Wewnętrznych,	
<b>Person in charge of the course:</b>	
dr n. med. Piotr Cygański,	
<b>Course coordinators:</b>	
<b>Notes:</b>	

common internal diseases.

W3 - The student knows and understands usefulness and limitations of laboratory tests in life-threatening conditions.

W4 - The student knows and understands theoretical and practical basics of laboratory diagnostics.

W5 - The student knows and understands indications for monitoring therapy.

#### **Skills**

U1 - The student takes medical history in an adult patient.

U10 - The student assists with the following medical procedures: a) transfusion of blood and blood products b) drainage of the pleural cavity c) puncture of the pericardial sac d) puncture of the peritoneal cavity e) epidermal tests f) skin and scarification tests. The student interprets the results of the above procedures.

U11 - The student properly plans consultations with specialists.

U2 - The student performs a complete and targeted physical examination of an adult patient.

U3 - The student can assesses and describes somatic and psychological status of the patient.

U4 - The student diagnoses life-threatening conditions.

U5 - The student can plans diagnostic, therapeutic and prophylactic management.

U6 - The student can takes samples for tests used in laboratory diagnostics.

U7 - The student can performs basic medical procedures and treatments, including: body temperature measurement, heart rate measurement, non-invasive blood pressure measurement, monitoring of vital signs with a cardiomonitor, pulse oximetry, spirometric test, oxygen treatment, assisted and replacement ventilation, oropharyngeal tube insertion, intravenous, intramuscular and subcutaneous injections, peripheral venous cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection, nasal, throat and skin swab collection, puncture of the pleural cavity, bladder catheterization in women and men, gastric dipping, gastric lavage, enema, standard resting electrocardiogram with interpretation, electrical cardioversion, cardiac defibrillation, simple test strips and blood glucose measurement

U8 - The student can analyzes possible side effects of individual drugs and interactions between them.

U9 - The student can interprets lab test results and their abnormal values.

#### **Social competence**

K1 - The student is ready to establish and maintain a deep, respectful contact with the patient, as well as show understanding for worldview and cultural differences

K2 - The student is ready to guided by the good of the patient

K3 - The student is ready to respects physician-patient privilege and the patient's rights.

K4 - The student is ready to see and recognize his / her own limitations and make a self-assessment of deficits and educational needs

K5 - The student refers to corpses and human remains with dignity and respect.

#### **BASIC LITERATURE**

1) Siegenthaler W, Differential Diagnosis in Internal Medicine. , wyd. Thieme, 2011 ; 2) Kumar & Clarks Saunders , Clinical medicine, wyd. Elsevier, 2009 ; 3) Boone N.A., Colledge N.R – Editors, Davidson's Principles & Practice of Medicine, wyd. Churchill LivingstoneElsevier, 2010 ; 4) Lee Goldman, MD and Andrew I. Schafer, MD , Goldman's Cecil Medicine, wyd. Saunders, 2012

#### **SUPPLEMENTARY LITERATURE**

1), -

## Detailed description of the awarded ECTS points - part B

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**ECTS: 10**  
**YEAR: 2025L**

**INTERNAL MEDICINE 8/8**  
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The awarded number of ECTS points is composed of:

1. Contact hours with the academic teacher:

- participation in: classes	150 h.
- consultation	4 h.
	154 h.

2. Student's independent work:

- preparing for classes	96 h.
	96 h.

1 ECTS point = 25-30 h of the average student's work, number of ECTS points = 250 h : 25 h/ECTS = 10,00 ECTS

on average: **10 ECTS**

- including the number of ECTS points for contact hours with direct participation of the academic teacher:	6,16 ECTS points,
- including the number of ECTS points for hours completed in the form of the student's independent work:	3,84 ECTS points,