

Study Programme**Part A) of the study programme****Learning Outcomes**

Faculty offering the study:		Faculty of Medicine
Field of study:		medicine
Level of qualification:		long-cycle studies
Level in the Polish Qualifications Framework:		level 7
Degree profile:		general academic
Degree awarded:		lekarz
Association of the field of study with scientific or artistic discipline(s) to which the learning outcomes refer:		Discipline: medical sciences (100%) Main discipline: medical sciences
Symbol	Upon completion of studies, the graduate achieves the following learning outcomes:	
A. MORPHOLOGICAL SCIENCES		
KNOWLEDGE		
The graduate knows and understands:		
A.W1	the structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology;	
A.W2	cellular structures and their functional specialisations;	
A.W3	microarchitecture of tissues, extracellular matrix and organs	
A.W4	the stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic).	
SKILLS		
The graduate is able to:		
A.U1	operate an optical microscope, including the use of immersion;	
A.U2	recognise structures corresponding to organs, tissues, cells and cellular structures, describe them in microscopic images and interpret their structure and the relationship between structure and function;	
A.U3	explain the anatomical basis of the physical examination;	
A.U4	infer relationships between anatomical structures on the basis of intravenous diagnostic examinations, particularly in the field of radiology.	
B. SCIENTIFIC BASICS OF MEDICINE		
KNOWLEDGE		
The graduate knows and understands:		
B.W1	water and electrolyte management in biological systems;	
B.W2	acid-base balance and the mechanism of action of buffers and their importance in body homeostasis;	
B.W3	the concepts of solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan equilibrium;	
B.W4	physical laws describing fluid flow and factors affecting vascular resistance to blood flow;	
B.W5	natural and artificial sources of ionising radiation and their interaction with matter;	
B.W6	the physicochemical and molecular basis of the sensory organs;	
B.W7	the physical basis of non-invasive imaging methods;	
B.W8	the physical basis of selected therapeutic techniques;	
B.W9	the structure of lipids and polysaccharides and their functions in cellular and extracellular structures;	

B.W10	I-, II-, III- and IV-order structures of proteins as well as post-translational and functional modifications of proteins and their significance;
B.W11	the function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin;
B.W12	the functions of the human genome, transcriptome and proteome and the methods used to examine them, the processes of DNA replication, repair and recombination, transcription and translation and degradation of DNA, RNA and proteins, and the concepts of regulation of gene expression;
B.W13	the basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors;
B.W14	basic methods used in laboratory diagnostics, including protein and nucleic acid electrophoresis;
B.W15	the metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy;
B.W16	the modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, and examples of disruption of these processes leading to cancer and other diseases;
B.W17	processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to organismal function;
B.W18	the functions and applications of stem cells in medicine;
B.W19	the basics of stimulation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscle;
B.W20	the function and regulatory mechanisms of all organs and systems of the human body and the relationships between them;
B.W21	the processes of ageing and changes in organ function associated with ageing;
B.W22	the basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters;
B.W23	basic IT and biostatistical tools used in medicine;
B.W24	basic methods of statistical analysis used in population-based and diagnostic research;
B.W25	the potential of modern telemedicine as a tool for assisting the doctor;
B.W26	the principles of research for the advancement of medicine.
SKILLS	
<i>The graduate is able to:</i>	
B.U1	use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body;
B.U2	assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection;
B.U3	calculate the molar and percentage concentrations of compounds and the concentrations of substances in iso-osmotic, mono- and multi-component solutions;
B.U4	calculate the solubility of inorganic compounds, identify the chemical basis of the solubility or lack thereof of organic compounds and its practical relevance to nutrition and therapy;
B.U5	determine the pH of a solution and the effect of pH changes on inorganic and organic compounds;
B.U6	predict the direction of biochemical processes in relation to the energy status of cells;
B.U7	perform simple functional tests to assess the functioning of the human body as a stable control system (exercise stress tests) and interpret numerical data on basic physiological variables;
B.U8	use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences;
B.U9	select an appropriate statistical test, carry out basic statistical analyses and use appropriate methods to present the results;
B.U10	classify research methodology, including a distinction between research experimental and observational with their sub-types, rank them according to the degree of reliability of the results provided and correctly assess the strength of scientific evidence;
B.U11	plan and carry out scientific research and interpret the results and formulate conclusions;
B.U12	use basic laboratory and molecular techniques.
C. PRECLINICAL SCIENCES	

KNOWLEDGE	
<i>The graduate knows and understands:</i>	
C.W1	the normal human karyotype and the different types of sex determination;
C.W2	genetic causes of hereditary predisposition to cancer;
C.W3	principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits inheritance of extra-nuclear genetic information;
C.W4	the genetic determinants of human blood groups and serological conflict in the Rh system;
C.W5	genetic determinants of the most common monogenic, polygenic and multifactorial diseases;
C.W6	factors affecting the primary and secondary genetic balance of a population;
C.W7	genetic determinants of congenital malformations and selected rare diseases and the possibility of their prevention;
C.W8	genetic diagnostic methods and the basic indications for their application;
C.W9	the genetic mechanisms of acquisition of drug resistance by microorganisms and cancer cells and their relationship to the need for individualisation of pharmacotherapy;
C.W10	micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites;
C.W11	the epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution;
C.W12	the pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention;
C.W13	the consequences of exposure of the human body to chemical and physical agents and principles of its prevention;
C.W14	the aetiology, pathogenesis, pathophysiology, routes of transmission, forms and prevention of iatrogenic infections;
C.W15	methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result);
C.W16	diagnostic principles for infectious, allergic, autoimmune and neoplastic diseases and blood diseases, based on the antigen-antibody reaction;
C.W17	the principles of disinfection, sterilisation and aseptic management;
C.W18	specific and non-specific mechanisms of humoral and cellular immunity;
C.W19	the major tissue compatibility system;
C.W20	types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation;
C.W21	the immunology of cancer and immune-mediated diseases and the principles of immunotherapy;
C.W22	the genetic basis of donor and recipient selection and the principles of transplant immunology;
C.W23	the clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration;
C.W24	the aetiology, mechanisms and consequences of haemodynamic disorders;
C.W25	organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology;
C.W26	the pathogenesis of diseases, including genetic and environmental determinants;
C.W27	the pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders;
C.W28	the different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters;
C.W29	the physiological and pathological determinants of drug absorption, metabolism and elimination by the human body;
C.W30	the basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics;
C.W31	major adverse drug reactions, interactions and the problem of polypharmacy;
C.W32	the problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy;
C.W33	the possibilities and types of biological, cellular, gene and targeted therapies for specific diseases;
C.W34	the basic concepts of general toxicology;

C.W35	groups of drugs which, if abused, can lead to poisoning;
C.W36	the symptoms of the most common acute poisonings with selected groups of drugs, alcohol and other psychoactive substances, fungi and heavy metals;
C.W37	basic principles of diagnostic and therapeutic management of poisoning;
C.W38	the effect of oxidative stress on cells and its importance in the pathogenesis of disease and in the processes of ageing;
C.W39	the consequences of deficiency and excess of vitamins and minerals;
C.W40	the causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption;
C.W41	the principles of radiotherapy;
C.W42	the molecular basis of cancer and issues in cancer immunology;
C.W43	practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases.

SKILLS

The graduate is able to:

C.U1	chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases;
C.U2	make decisions on the necessity of cytogenetic and molecular tests;
C.U3	read basic genetic test results, including karyotypes;
C.U4	determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases;
C.U5	identify pathogens under the microscope;
C.U6	interpret microbiological test results;
C.U7	relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children;
C.U8	perform simple pharmacokinetic calculations;
C.U9	select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs;
C.U10	design rational chemotherapy regimens for infections - empirical and targeted;
C.U11	prepare prescription formulation records of selected medicinal substances and issue prescriptions, including e-prescriptions, in accordance with legislation;
C.U12	seek reliable information on medicinal products, with particular reference to the summary of product characteristics (SmPC) and databases;
C.U13	estimate the toxicological risks in specific age groups and in states of hepatic and renal failure, and prevent drug poisoning.

D. BEHAVIOURAL AND SOCIAL SCIENCES WITH ELEMENTS OF PROFESSIONALISM AND COMMUNICATION, INCLUDING THE IDEA OF HUMANISM IN MEDICINE

KNOWLEDGE

The student knows and understands:

D.W1	the psycho-physical development of the human being from birth to death, including the specific characteristics of physical, emotional, cognitive and social development;
D.W2	the concepts of health and illness, the influence of the social environment (family, work, social relations) and socio-cultural conditions (origin, social status, religion, nationality and ethnic group) on the patient's state of health;
D.W3	human behaviour that promotes health maintenance and the principles of motivating the patient towards health-promoting behaviour (Prochaska and DiClemente model of change, motivational interviewing);
D.W4	the concept of stress, including eustress and distress, and the impact of stress on the aetiopathogenesis and course of somatic diseases and psychiatric disorders, as well as mechanisms of coping with stress;
D.W5	social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudice and discrimination;
D.W6	the concept of empathy and the phrases and behaviours used to express it;
D.W7	the nature and role of verbal (conscious construction of messages) and non-verbal communication (e.g. facial expressions, gestures, management of silence and space);
D.W8	the psychosocial consequences of acute and chronic illness in children, including adolescents, and adults;

D.W9	the psychosocial consequences of hospitalisation of children, including adolescents, and adults in emergency situations and chronic diseases;
D.W10	the psychosocial consequences of illness for the patient's family (family with a sick child, including adolescent, adult and elderly);
D.W11	the role of the patient's family in the illness process (illness recognition, adaptation to illness, recovery) and ways of coping with difficult situations (illness progression, dying process, bereavement);
D.W12	problematic psychoactive substance use and addiction as well as behavioural addictions, methods of carrying out brief interventions with problematic psychoactive substance users, mechanisms of addiction formation, goals and ways of treating addicts and effective prevention strategies, psychosomatic disorders occurring in people in close relationship with an addict and therapeutic approaches;
D.W13	forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the principles for dealing with suspected violence, including the "Blue Card" (<i>Niebieska Karta</i>) procedure;
D.W14	the concept of norm and pathology of sexual behaviour;
D.W15	the concept of humanism in medicine and its main concepts, theories and ethical principles used for a general framework of the appropriate interpretation and analysis of moral and medical issues;
D.W16	patient rights and the concept of patient well-being;
D.W17	the philosophy of palliative care and its importance in patient care at all stages of serious illness and a dignified death;
D.W18	history of medicine, features of modern medicine and the most important discoveries and achievements of the leading representatives of Polish and world medicine;
D.W19	principles of evidence-based medicine;
D.W20	the concepts of patient safety and safety culture and their organisational, communication and management aspects.
SKILLS	
<i>The graduate is able to:</i>	
D.U1	observe ethical models in professional activities, including planning and carrying out the therapeutic process in accordance with ethical values and the idea of humanism in medicine;
D.U2	recognise the ethical dimension of medical decisions and distinguish factual from normative aspects;
D.U3	respect patients' rights;
D.U4	demonstrate responsibility for improving their own skills
D.U5	critically analyse medical literature, including in English, and draw conclusions;
D.U6	communicate with the patient in one of foreign languages at B2+ level of the Common European Framework of Reference for Languages;
D.U7	develop and improve self-awareness, self-reflection and self-care, and reflect with others on their own way of communicating and behaving;
D.U8	recognise their own emotions and manage them in their relationships with others in order to perform their work effectively despite their own emotional reactions;
D.U9	describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour;
D.U10	use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate;
D.U11	adapt verbal communication to the needs of the patient, expressing themselves clearly and avoiding medical jargon;
D.U12	recognise and analyse difficult situations and communication challenges, including crying, strong emotions, anxiety, interruptions, awkward and sensitive issues, silence, withdrawal, aggressive and demanding behaviour, and deal with them in a constructive manner;
D.U13	establish a relationship with the patient and the person accompanying the patient in order to build an appropriate relationship (e.g. 4 Habits Model: Invest in the beginning, Demonstrate empathy, Elicit the patient's perspective, Invest in the end);
D.W14	look at the situation from the patient's perspective while building an appropriate conversational context and using the elicitation method, and then incorporating this into the construction of verbal messages.

E. NON-SURGICAL CLINICAL SCIENCES	
KNOWLEDGE	
<i>The student knows and understands:</i>	
E.W1	principles of natural feeding, healthy child nutrition and obesity prevention, as well as nutritional modifications resulting from disease;
E.W2	principles for the prevention of childhood illnesses, including screening, balance examinations and immunisation;
E.W3	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies);
E.W4	issues of the abused and sexually exploited child and the principles of intervention with such patients;
E.W5	issues of mental impairment, behavioural disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children;
E.W6	basic foetal diagnosis and therapy;
E.W7	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts,

	kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis).
E.W8	principles of pharmacotherapy in patients with renal failure and renal replacement therapy;
E.W9	principles of nutritional and fluid therapy in various disease states;
E.W10	the course and symptoms of the ageing process and the principles of holistic geriatric assessment and multidisciplinary care for older adults;
E.W11	peculiarities in the clinical manifestations, diagnosis and therapy of the most common diseases affecting the older adults;
E.W12	risks associated with hospitalisation of older adults;
E.W13	the basic principles of organising care for an older adult and the responsibilities of a carer for an older adult;
E.W14	types of vascular access and their application, in particular in oncology;
E.W15	basic syndromes of neurological symptoms;
E.W16	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers;
E.W17	general symptomatology of mental disorders and the principles of their classification according to the main classification systems;
E.W18	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common psychiatric diseases and their complications: 1) schizophrenia; 2) affective disorders; 3) neurotic and adaptation disorders; 4) eating disorders; 5) substance use disorders; 6) sleep disorders; 7) dementias; 8) personality disorders;
E.W19	suicidal behaviour issues;

E.W20	the nature of mental disorders and their treatment in children, including adolescents, and older adults;
E.W21	symptoms of mental disorders in the course of somatic diseases, their impact on the course of the underlying disease and prognosis, as well as the principles of their treatment;
E.W22	issues of human sexuality and the underlying disorders associated with it;
E.W23	legal regulations relating to mental health care, with particular reference to rules on admission to psychiatric hospitals;
E.W24	issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided;
E.W25	principles of qualification for palliative care and therapeutic management of the most common problems in palliative medicine, including: 1) symptomatic treatment of the most common somatic symptoms; 2) management of cancer cachexia and prevention and treatment of pressure sores; 3) the most common emergencies in palliative medicine;
E.W26	principles of palliative care management in a patient with suffering from a serious illness, including terminal conditions;
E.W27	classification of pain (acute and chronic or nociceptive, neuropathic and nociplastic) and its causes, pain assessment tools and principles of its pharmacological and non-pharmacological treatment;
E.W28	the concept of disability;
E.W29	the role of medical rehabilitation and methods of its application;
E.W30	indications for medical rehabilitation in the most common diseases;
E.W31	the basic issues of prevention and the management of occupational exposure to hazardous and noxious agents;
E.W32	rules for dealing with suspicion and detection of an infectious disease;
E.W33	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic and preventive management of the most common infectious diseases and their complications: 1) bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, pertussis, tuberculosis, Lyme disease and gastrointestinal infections; 2) viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, infections with Herpesviridae, human immunodeficiency virus and neurotropic viruses; 3) parasitic diseases, including giardiasis, amebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, roundworm, tapeworm and pinworm; 4) mycoses, including candidiasis, aspergillosis and pneumocystosis; 5) nosocomial infections;
E.W34	principles of management of exposure to potentially infectious material;

E.W35	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common dermatological and sexually transmitted diseases;
E.W36	the causes, symptoms, principles of diagnosis and therapeutic management of the most common genetically determined diseases in children and adults;
E.W37	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases in family physician practice;
E.W38	principles of health-oriented behaviour, basics of prevention and early detection of the most common civilisation diseases and principles of screening for these diseases;
E.W39	types of biological materials used in laboratory diagnostics and principles of collecting material for tests;
E.W40	possibilities and limitations of laboratory tests;
E.W41	indications for the implementation of monitored therapy;
E.W42	indications for treatment with blood components and the principles of their administration.
SKILLS	
<i>The graduate is able to:</i>	
E.U1	interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives;
E.U2	interview the child and their carers, using skills on the content, process and perception of communication, taking into account the biomedical and patient perspectives;
E.U3	take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness;
E.U4	perform a targeted physical examination of breast and prostate gland in adults;
E.U5	carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric;
E.U6	perform a complete and focused physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation, including: 1) general paediatric; 2) neurological; 3) musculoskeletal system; 4) ophthalmology; 5) otolaryngology;
E.U7	carry out a psychiatric examination of the patient and assess his mental state;
E.U8	carry out balance examinations, including comparing anthropometric and blood pressure measurements with data on centile grids, as well as assess the progression of puberty;
E.U9	recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash;

	10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration;
E.U10	recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular for symptoms such as: 1) fever; 2) cough and expectoration; 3) dyspnoea; 4) nasal and ear discharge; 5) urinary disturbances; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) palpitations; 12) fainting; 13) osteoarticular pain; 14) oedema; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in stool; 19) dehydration; 20) jaundice; 21) cyanosis; 22) headache; 23) red eye syndrome;

E.U11	recognise the symptoms of hazardous and harmful use of alcohol and problematic use of other psychoactive substances, symptoms of psychoactive substance dependence and behavioural addictions, and propose appropriate therapeutic and medical treatment;
E.U12	recognise conditions requiring hospital treatment;
E.U13	qualify the patient for preventive vaccination;
E.U14	perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2. various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result;
E.U15	use personal protective equipment appropriate to the clinical situation;
E.U16	determine the patient's death;
E.U17	participate in the process of a patient dying with dignity, using the potential of palliative care;
E.U18	maintain patient medical records, also in electronic form, in accordance with the law;
E.U19	plan diagnostic, therapeutic and preventive management of cancer treatment on the basis of test results and medical documentation provided;
E.U20	provide health care services using available IT or communication systems used in health care;
E.U21	conduct patient health education, including nutrition education tailored to individual needs;
E.U22	apply rational antibiotic therapy depending on the patient's clinical condition;
E.U23	conduct a conversation with the patient, taking into account the pattern of the conversation (starting the conversation, gathering information, explaining and planning, ending the conversation), taking into account the structuring of such a conversation and shaping the relationship with the patient using the chosen model (e.g., Calgary-Cambridge guidelines, Segue, Kalamazoo Consensus, Maastricht Maas Global), also through electronic communications;
E.U24	take a history with the patient for the presence of suicidal thoughts, in case it is warranted;
E.U25	communicate information to the patient, adapting the amount and content to the patient's needs and capabilities of the patient, and supplement verbal information with models and written information, including charts and instructions, and use them accordingly;
E.U26	make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and consequences of the decision) and obtain patient's conscious consent;
E.U27	communicate with patients from groups at risk of economic or social exclusion, while respecting their dignity;
E.U28	identify social determinants of health, indicators of anti-health and self-destructive behaviors and discuss them with the patient and make a note in the medical documentation;

E.U29	identify possible indicators of violence, including domestic violence, conduct an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" (<i>Niebieska Karta</i>) procedure;
E.U30	apply the principles of providing feedback (constructive, non-judgmental, descriptive) as part of team cooperation;
E.U31	accept, explain and analyse your own role and responsibilities within the team and recognise your role as a doctor in the team;
E.U32	obtain information from team members, respecting their diverse opinions and specialized competences, and take this information into account in the patient's diagnostic and therapeutic plan;
E.U33	discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity;
E.U34	use the following protocols (e.g. when transferring patient care, ordering or providing patient consultations): 1) ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury suspected -suspected effects of the injury), S (Symptoms/Signs), T (Treatment/Time – treatment and time); 2) RSVP/ISBAR (R (Reason), S (Story) V (Vital signs – vital signs), P (Plan – plan for the patient)/I (Introduction – introduction), S (Situation), B (Background), A (Assessment), R (Recommendation).
F SURGICAL CLINICAL SCIENCES	
KNOWLEDGE	
<i>The graduate knows and understands:</i>	
F.W1	causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers;
F.W2	causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children;
F.W3	basic classical and minimally invasive surgical techniques;
F.W4	eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications;
F.W5	the most common complications of modern oncology treatment;
F.W6	principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation;
F.W7	principles of postoperative treatment with pain therapy and monitoring post-operative care;
F.W8	indications and principles of intensive care;
F.W9	guidelines for cardiopulmonary resuscitation of neonates, children and adults;
F.W10	the most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric,

	h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology;
F.W11	principles for dealing with suspected sexual violence;
F.W12	principles of operation of the integrated system of Emergency Medical Services
F.W13	invasive methods of pain management;
F.W14	the principles of management of central long-standing venous catheters;
F.W15	female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures;
F.W16	male reproductive functions and the disorders associated with them as well as diagnostic and therapeutic management;
F.W17	problems of contemporary imaging, in particular: 1) the radiological symptomatology of the underlying diseases; 2) instrumental methods and imaging techniques used to perform medical procedures; 3) indications, contraindications and preparation of the patient for the various types of imaging examinations and contraindications to the use of contrast agents;
F.W18	issues in the field of ophthalmic diseases, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management of the most common ocular diseases; 2) ophthalmic complications of systemic diseases together with their symptomatology and methods of management in these cases; 3) surgical management of specific diseases of the eye; 4) groups of systemic drugs with associated ophthalmic complications and contraindications and their mechanism of action;
F.W19	issues in laryngology, phoniatrics and audiology, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx and larynx; 2) diseases of the facial nerve and selected structures of the neck; 3) principles of diagnostic and therapeutic management of mechanical injuries of the ear, nose, larynx and oesophagus; 4) principles of diagnostic and therapeutic management of hearing, voice and speech disorders;
F.W20	issues in neurology and neurosurgery, in particular the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of the central nervous system as regards: 1) cerebral oedema and its sequelae, with particular reference to emergencies; 2) other forms of intracranial constriction with their consequences; 3) craniocerebral trauma; 4) vascular malformations of the central nervous system; 5) neoplastic tumours of the central nervous system; 6) diseases of the spine and spinal cord;
F.W21	principles for promoting tissue and cell donation, indications for transplantation of blood-forming organs, tissues and haematopoietic cells, complications of treatment and principles for long-term care after transplantation;
F.W22	conditions where life expectancy, functional status or patient preference limit management according to disease-specific guidelines;
F.W23	principles for the presumption and diagnosis of brain death.
SKILLS	

<i>The graduate is able to:</i>	
F.U1	wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure;
F.U2	apply and change a sterile dressing;
F.U3	assess and treat a simple wound, including local anesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing;
F.U4	recognise the most common life-threatening conditions, including using various imaging techniques;
F.U5	recognise the most common types of fractures, especially long bones, based on radiological examination;
F.U6	temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing;
F.U7	immobilize the cervical and thoracolumbar spine after injury;
F.U8	treat external bleeding;
F.U9	conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC);
F.U10	conduct advanced life support in neonates (Newborn Life Support, NLS) and children (Pediatric Advanced Life Support, PALS) in accordance with ERC guidelines;
F.U11	perform basic life support in adults, including using an automatic external defibrillator, in accordance with ERC guidelines;
F.U12	conduct advanced life support (ALS) in adults in accordance with ERC guidelines;
F.U13	apply proper medical treatment in the case of physiological pregnancy and postpartum in accordance with the standards of perinatal care;
F.U14	recognise the most common symptoms indicating an abnormal course of pregnancy and postpartum, apply and interpret diagnostic tests, perform differential diagnosis, implement therapy, monitor treatment effects and evaluate indications for specialist consultation, especially in the case of abdominal pain, uterine contractions, vaginal bleeding, abnormal heart rate and foetal movement, hypertension;
F.U15	detect and interpret foetal heart activity;
F.U16	recognise the beginning of labor and symptoms of abnormal labor;
F.U17	assist in physiological childbirth;
F.U18	apply proper medical treatment in case of abnormal bleeding from the genital tract, amenorrhea, pelvic pain (pelvic inflammatory disease, ectopic pregnancy), vaginitis and vulvitis, sexually transmitted diseases;
F.U19	apply proper medical treatment in the field of birth control;
F.U20	recognise ophthalmological conditions requiring urgent specialist assistance and provide initial pre-hospital assistance in cases of physical and chemical injuries to the eye;
F.U21	pass unfavorable messages using the selected protocol, e.g.: 1) SPIKES: S (Setting – appropriate environment), P (Perception – getting to know how much the interlocutor knows), I (Invitation/Information – invitation to conversation / information), K (Knowledge – providing unfavorable information), E (Emotions and empathy), S (Strategy and summary), 2) EMPATHY: E (Emotions), M (Place), P (Patient's perspective), A (Appropriate language), T (Message content), I (Additional information), A (Annotation in the documentation), Journal of Laws – 35 – 34 – Pos. 2152 3) ABCDE: A (Advance preparation - preparing for a conversation), B (Building therapeutic environment - establishing good contact with the family), C (Communicating well - conveying bad news, taking into account the rules of communication), D (Dealing with reactions – dealing with difficult emotions), E (Encouraging and validate emotions – right to show emotions, redirect them and respond appropriately, aiming to end the meeting) – including supporting the family in the process of dying with dignity and informing the family about the patient's death;
F.U22	obtain information from team members, respecting their diverse opinions and specialized competences, and include this information in the patient's diagnostic and therapeutic plan, as well as use ATMIST and RSVP/ISBAR protocols.
G. LEGAL AND ORGANISATIONAL ASPECTS OF MEDICINE	
KNOWLEDGE	

<i>The graduate knows and understands:</i>	
G.W1	methods for assessing individual and population health, measures and principles for monitoring population health, disease classification systems and medical procedures;
G.W2	determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine;
G.W3	the epidemiology of infectious diseases, including those related to health care, and the non-infectious ones, types and modes of prevention at different stages of the natural history of disease, and the role and principles of epidemiological surveillance;
G.W4	the concept and functions of public health, the concept, tasks and methods of health promotion, the concept of quality in health care and the factors influencing it, the structure and organisation of the health care system at national and global level, and the impact of economic conditions on health care options;
G.W5	legal regulations concerning patients' rights and the Patient Ombudsman, as well as legal regulations relevant to the medical activity in the field of labour law, the basis of the medical profession and the functioning of the medical self-government;
G.W6	legal regulations on the organisation and financing of the health care system, the provision of health services financed from public funds and the principles of organisation of medical entities, the principles of operation of information and communication tools and services in health care (e-health);
G.W7	the legal obligations of the doctor in determining the death of a patient;
G.W8	legal regulations on medical experimentation and the conduct of scientific research involving human participants;
G.W9	legislation on transplantation, artificial procreation, abortion, aesthetic treatments, palliative care, persistent therapy, mental illness, infectious diseases;
G.W10	regulacje prawne dotyczące obowiązków lekarza w przypadku podejrzenia przemocy w rodzinie;
G.W11	basic pharmaceutical law regulations, including the principles of marketing medicinal and medical products, issuing prescriptions, including e-prescriptions, reimbursement of medicines, cooperation between the doctor and the pharmacist, reporting of adverse drug reactions;
G.W12	legal regulations on medical confidentiality, the criminal, civil and professional liability of the doctor, the principles of keeping, storing and providing access to medical records, including e-documentation, and the protection of personal data;
G.W13	the concepts of violent death and sudden death and the differences between trauma and injury;
G.W14	the legal basis and principles of the medical practitioner's conduct during the inspection of the corpse at the scene of its discovery and the forensic medical examination of the corpse;
G.W15	principles of forensic medical diagnosis and opinion in cases involving infanticide and reconstruction of the circumstances of a road accident;
G.W16	principles for expert opinions;
G.W17	principles of forensic medical opinion regarding ability to participate in procedural activities, biological effect and damage to health;
G.W18	the concept and typology of adverse events, including medical errors and medical incidents, their most common causes, consequences, principles of prevention and opinions in such cases;
G.W19	principles of collecting material for toxicological and haemogenetic tests;
G.W20	the legal regulation of the provision of information on a patient's health during life and after death, including the scope of the information, the circle of persons entitled to receive the information and the rules on its provision to other persons, as well as the limitations on the scope of the information provided;
G.W21	the epidemiology of cancer, in particular nutritional, environmental and other lifestyle-related determinants of cancer risk;
G.W22	the importance of screening tests in oncology, including the risks associated with diagnostic tests for healthy individuals, and the health benefits in relation to the most common cancers in the Republic of Poland.
SKILLS	
<i>The graduate is able to:</i>	
G.U1	describe the demographic structure of the population and, on this basis, assess and predict health problems of the population;

G.U2	collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention;
G.U3	interpret positive and negative measures of health;
G.U4	assess the epidemiological situation of infectious and non-infectious diseases in the Republic of Poland and in the world;
G.U5	explain to people using health services their basic rights and the legal basis for providing these services;
G.U6	issue medical statements and medical certificates, prepare opinions for the patient, authorized bodies and entities, prepare and maintain medical records (in electronic and paper form) and use information and communication tools and services in health care (e-health);
G.U7	recognise behaviors and symptoms indicating the possibility of violence, including domestic violence, when examining a patient;
G.U8	act in a way that prevents adverse events and ensures quality in the protection of patient health and safety, monitor the occurrence of adverse events and responds to them, inform about their occurrence and analyze their causes;
G.U9	collect blood for toxicological tests and secure material for hemogenetic tests;
G.U10	organise the working environment in such a way as to ensure the safety of the patient and other persons, taking into account the influence of human factors and ergonomic principles;
G.U11	ustalić możliwość zastosowania nowych sposobów leczenia w odniesieniu do danego pacjenta w oparciu o aktualne wyniki badań klinicznych.
H. PRACTICAL CLINICAL CLERKSHIP IN THE 6TH YEAR	
SKILLS	
<i>The graduate is able to:</i>	
H.U1	measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them using a cardiomonitor and a pulse oximeter;
H.U2	perform non-instrumental and instrumental airway clearing;
H.U3	measure peak expiratory flow;
H.U4	collect and secure blood and other biological material for laboratory tests, including microbiological ones;
H.U5	perform intravenous, intramuscular and subcutaneous administration of the drug;
H.U6	perform various forms of inhalation therapy and select an inhaler appropriate to the clinical situation;
H.U7	collect arterialised blood and arterialised capillary blood;
H.U8	perform strip tests, including measuring glucose concentration using a glucometer;
H.U9	take swabs for microbiological and cytological tests;
H.U10	perform urinary bladder catheterization in a woman and a man;
H.U11	insert a gastric tube;
H.U12	perform a rectal enema;
H.U13	perform pleural procedures: puncture and decompression of pneumothorax;
H.U14	perform a standard resting electrocardiogram and interpret its result;
H.U15	perform defibrillation, electrical cardioversion, external electrostimulation;
H.U16	wash hands surgically, put on sterile gloves, dress for an operation or procedure requiring sterility, prepare the operating field in accordance with aseptic rules and participate in the surgical procedure;
H.U17	apply and change a sterile dressing;
H.U18	assess and treat a simple wound, including local anaesthesia (superficial, infiltration), apply and remove surgical sutures, apply and change a sterile surgical dressing;
H.U19	treat external bleeding;
H.U20	temporarily immobilize the limb, select the type of immobilization in typical clinical situations and check the proper blood supply to the limb after applying the immobilization dressing;
H.U21	immobilize the cervical and thoracolumbar spine after injury;
H.U22	perform anterior nasal tamponade;
H.U23	perform an ultrasound examination in life-threatening situations according to the FAST protocol or its equivalent and interpret its result;
H.U24	use personal protective equipment appropriate to the clinical situation;
H.U25	interview an adult, including an older adult, using skills regarding the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective;

H.U26	interview a child and his/her caregivers, using skills regarding the content, process and perception of communication, taking into account the biomedical and patient perspectives;
H.U27	interview a patient in a life-threatening situation using the SAMPLE scheme;
H.U28	perform a complete and focused physical examination of the adult tailored to the specific clinical situation;
H.U29	conduct a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to the specific clinical situation;
H.U30	convey unfavorable news using the selected protocol (e.g. SPIKES, EMPATHY, ABCDE), including supporting the family in the process of the patient dying with dignity and informing the family about the patient's death;
H.U31	obtain information from team members, respecting their diverse opinions and specialized competences, take this information into account in the patient's diagnostic and therapeutic plan, and apply ATMIST, RSVP/ISBAR protocols;
H.U32	conduct a psychiatric examination of the patient and assess his/her mental state;
H.U33	confirm the patient's death;
H.U34	conduct check-up tests, including comparison of anthropometric and blood pressure measurements with data on percentile charts, and assess the degree of puberty;
H.U35	qualify the patient for immunisation;
H.U36	perform oxygen therapy using non-invasive methods
H.U37	perform basic life support (BLS) in neonates and children in accordance with ERC guidelines;
H.U38	perform advanced neonatal resuscitation (NLS) and paediatric resuscitation (PALS) in accordance with ERC guidelines;
H.U39	perform basic life support (BLS) in adults, including using an automated external defibrillator, in accordance with ERC guidelines;
H.U40	perform advanced life support (ALS) in adults in accordance with ERC guidelines;
H.U41	recognise the most common life-threatening conditions, with the application of various imaging techniques;
H.U42	recognise ophthalmological conditions requiring urgent specialist assistance and provide initial pre-hospital assistance in cases of physical and chemical injuries to the eye;
H.U43	perform detection and interpretation of foetal heart function;
H.U44	perform activities while assisting in physiological childbirth.
	SOCIAL COMPETENCE
	<i>The graduate is ready to:</i>
K_K01	establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences;
K_K02	consider patient's well-being as a priority;
K_K03	observe medical confidentiality and other patient rights;
K_K04	take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease;
K_K05	identify and recognise own limitations and to self-assess educational deficits and needs;
K_K06	promote health behaviours;
K_K07	use objective sources of information;
K_K08	formulate opinions based on own assessment and observation;
K_K09	implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment;
K_K10	formulate opinions pertaining to different aspects of professional activity;
K_K11	accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.

Part B) of the study programme

Description of the process leading to obtaining the learning outcomes

Faculty offering the programme:	Faculty of Medicine
Programme:	medicine
Level of study:	long-cycle studies
Level of the Polish Qualifications Framework:	level 7
Degree profile:	general academic
Association of the field of study with scientific or artistic discipline(s) to which the learning outcomes refer:	Discipline: medical sciences (100%) Main discipline: medical sciences
Mode of study:	full-time studies
Number of semesters:	12
Number of ECTS credits required to complete a programme at a given level:	360
Total number of didactic hours:	5835
Professional title awarded to graduates:	lekarz
Indication of the relation of the study programme to the NCU mission and strategy:	The training of future doctors at the Faculty of Medicine at NCU Collegium Medicum in Bydgoszcz aims at equipping graduates with knowledge, skills and professional competences in accordance with the Polish Qualification Framework and the standards in force in the European Union, while it is based on models of the global reach, as well as the needs of the Polish and European labour markets. Such a process makes it possible to increase the quality of the health services provided, which are one of the most important elements in the development of modern civil societies - determining the sense of social health security. The compatibility of the curriculum in the Medicine programme shows a connection with the mission and strategy of Nicolaus Copernicus University for 2021-2026 and with the strategy for the development of the Faculty of Medicine - through humanism to medicine, while shaping young people's attitudes in terms of culture and respect for academic customs in an atmosphere of freedom, equality and principles of co-partnership. The designed didactic and scientific process is aimed at comprehensive education of students, the main goal of which is the acquisition of a wealth of knowledge and practical skills needed by a doctor to meet the challenges and expectations of modern civilisation - regarding the development of intellectual potential and increased innovation. This is guaranteed by the rapid development of medicine and clinical sciences. The academic teaching of medical students is carried out on many levels of modern education,

	with a focus on scientific activities, corresponding to the current and future needs of society. The learning outcomes achieved by the students prepare them for their profession with the ability to use modern forms of diagnosis from a scientific aspect and to analyse research results, both from a theoretical and practical point of view. An integral part of the academic teaching of medical students, in accordance with the NCU mission, is its popularisation activity, taking into account health promotion and the implementation of prevention, which determines the success of all medical activity. Teaching and educating students in the acquisition of social competences, included in the curriculum, is performed in accordance with the universal ethical principles and rules of conduct established in the tradition of European universities. The curriculum aims not only at the acquisition of the latest knowledge and practical skills in the field of medicine, but also at the comprehensive development of personality, creativity, sensitivity and empathy, as well as at the acquisition of proper moral principles through the development of social and humanitarian activity and care for the general level of culture. In addition, the Faculty of Medicine at Collegium Medicum in Bydgoszcz, using innovative educational techniques, develops the need for self-education and education aimed at shaping in students creative personalities and acquiring appropriate practical skills. The curriculum of medical education is also in line with the Strategy for the Development of Nicolaus Copernicus University in Toruń, whose main strategic objective is to achieve a prominent place among European universities. It is also designed so that its implementation contributes to the achievement of a number of directional goals, including strengthening Nicolaus Copernicus University's position as one of the leading academic centres in Poland. In view of the curriculum - in accordance with the mission of NCU - the students of the Medicine programme are given opportunities to undertake activities resulting from academic cooperation in the European and global dimension. The internationalisation of scientific and didactic activities at the Faculty of Medicine of the Medical College in Bydgoszcz takes place by including classes in English, German and French in the educational offer and conducting active scientific cooperation, which is manifested, among others, by joint publications, research projects, scientific internships, study visits and conducting international studies at the Faculty of Medicine. In addition, it should be mentioned that the curriculum for Medicine programme has been constructed in such a way as to best fit in with the mission of the Faculty of Medicine of Collegium Medicum in Bydgoszcz and to fully realise its strategic goals. The structured proper educational process and the staff consisting of academic teachers with extensive experience and scientific achievements in numerous clinical disciplines, allows to undertake joint national
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and international research projects and creates an original and prestigious educational offer for the acquisition of professional knowledge, practical skills and interpersonal competences.

Courses/Groups of courses along with expected learning outcomes

Groups of courses	Course	Expected learning outcomes	Forms and methods of training which ensure the achievement of learning outcomes	Methods for the verification and assessment of the learning outcomes achieved by the student
Group A	Normal Anatomy (1/2)	Lectures: The graduate knows and understands/is able to/is ready to: A.W1.the structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W3. microarchitecture of tissues, extracellular matrix and organs; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic); A.U3. explain the anatomical basis of the physical examination; A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology. K_K05 identify and recognise own limitations and to self-assess educational deficits and needs K_K07 use objective sources of information K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety. Tutorials:	Lectures: • informative lecture • conversational lecture • educational discussion • analysis of case reports Tutorials: • demonstration using formalin preparations and anatomical models, • anatomical preparation, • extended observation, • didactic discussion, • case analysis using preparation films and anatomical charts.	Lectures: Theoretical test : (≥ 60%) Extended observation : (≥ 50%) Tutorials: Practical test: (≥ 60%) Theoretical test: (≥ 60%) Extended observation: (≥ 50%)

		The graduate knows and understands/is able to/is ready to: A.W1. the structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W3. microarchitecture of tissues, extracellular matrix and organs ; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic); A.U3. explain the anatomical basis of the physical examination; A.U4.infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology.’ K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs ; K_K07 use objective sources of information; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Normal Anatomy (2/2)	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including	Lectures: • informative lecture • conversational lecture • educational discussion • analysis of case reports Tutorials: • demonstration using formalin preparations and anatomical models, • anatomical preparation,	Lectures: Theoretical exam: (≥ 60%) Extended observation: (≥ 50%) Tutorials: Practical test: (≥ 60%) Theoretical test: (≥ 60%) Theoretical exam: (≥ 60%) Extended observation: (≥ 50%)

		anatomical, histological and embryological terminology; A.W3. microarchitecture of tissues, extracellular matrix and organs; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic); A.U3. explain the anatomical basis of the physical examination; A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety. Tutorials: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W3. microarchitecture of tissues, extracellular matrix and organs ; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic); A.U3. explain the anatomical basis of the physical examination; A.U4. infer relationships between anatomical structures on the basis of	• extended observation, • didactic discussion, • case analysis using preparation films and anatomical charts.	
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		of intravenous diagnostic examinations, particularly in the field of radiology; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Histology	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W2. cellular structures and their functional specialisations; A.W3. microarchitecture of tissues, extracellular matrix and organs ; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology;	Lectures: • informative lecture • conversational lecture • educational discussion Tutorials: • didactic discussion • practical exercises • analysis of microscopic images	Lectures: Semester test (≥ 60%) Final written exam (≥60%) Extended observation (> 50%) Tutorials: Practical test (0-1) Written test: (≥ 60%) Recognition of histological slides as part of the practical part of the exam (≥ 60%) Extended observation (> 50%)

		A.W2. cellular structures and their functional specialisations; A.W3. microarchitecture of tissues, extracellular matrix and organs; A.U1. operate an optical microscope, including the use of immersion; A.U2. recognise structures corresponding to organs, tissues, cells and cellular structures, describe in microscopic images and interpret their structure and the relationship between structure and function; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information.		
	Embryology	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic);; F.W15. female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures;	Lectures: • informative lecture • conversational lecture • educational discussion Tutorials: • didactic discussion • practical exercises • analysis of microscopic images	Lectures: Final written exam (≥60%) Extended observation (> 50%) Tutorials: Oral test: (≥60%) Practical test: (≥60%) Extended observation (> 50%)

		F.W16. male reproductive functions and the disorders associated with them as well as diagnostic and therapeutic management; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W4. stages of development of the human embryo, the structure and function of the foetal membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic); F.W15. female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures; F.W16. male reproductive functions and the disorders associated with them as well as diagnostic and therapeutic management; A.U1. operate an optical microscope, including the use of immersion; A.U2. recognise structures corresponding to organs, tissues, cells and cellular structures, describe in microscopic images and interpret their structure and the		
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		relationship between structure and function; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information.		
Group B	General Chemistry	Lectures: The graduate knows and understands/is able to/is ready to: B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W3. concepts of solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan equilibrium; B.U3. calculate the molar and percentage concentrations of compounds and the concentrations of substances in iso-osmotic, mono- and multi-component solutions ; B.U4. calculate the solubility of inorganic compounds, identify the chemical basis of the solubility or lack thereof of organic compounds and its practical relevance to nutrition and therapy; B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W3. the concepts of solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan equilibrium; B.U3. calculate the molar and percentage concentrations of compounds and the concentrations of substances in iso-	Lectures: • informative lecture • conversational lecture Tutorials: • classic problem-based method, • exercise method - performing experiments independently • laboratory method, experiment, • demonstration method	Lectures: Extended observation (> 50%) Tutorials: Final test (> 60%) Reports – (grading system: pass/fail) Practical implementation of tasks (grading system: pass/fail) Extended observation (>50%)

		osmotic, mono- and multi-component solutions; B.U4. calculate the solubility of inorganic compounds, identify the chemical basis of the solubility or lack thereof of organic compounds and its practical relevance to nutrition and therapy; B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation.		
	Biochemistry (1/2)	Lectures: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W9. structure of lipids and polysaccharides and their functions in cellular and extracellular structures; B.W10. I-, II-, III- and IV-order structures of proteins as well as post-translational and functional modifications of proteins and their significance; B.W11. function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin; B.W13. basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors; B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; C.W39. consequences of deficiency and excess of vitamins and minerals;	Lectures: • informative lecture, • didactic discussion Tutorials: • explanation, • problem-based method, • didactic discussion, • case method, • laboratory tests, • practical tasks, • demonstration, • project method	Lectures: Mid-term test (MCQ) (> 60%) Extended observation (> 50%) Tutorials: Mid-term test (MCQ) (> 60%) Oral or written answer (> 60%) Observation of student activities during practical tasks (> 60%) Report (> 60%) Oral presentation (> 60%) Extended observation (> 50%)

		B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis B.W10. I-, II-, III- and IV-order structures of proteins as well as post-translational and functional modifications of proteins and their significance B.W11. the function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin B.W13. the basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors B.W15. the metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy C.W39. the consequences of deficiency and excess of vitamins and minerals B.U3. calculate the molar and percentage concentrations of compounds and the concentrations of substances in iso-osmotic, mono- and multi-component solutions B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds B.U12. use basic laboratory and molecular techniques K_K05 identify and recognise own limitations and to self-assess educational deficits and needs K_K07 use objective sources of information		
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		K_K08 formulate opinions based on own assessment and observation		
	Biochemistry (2/2)	Lectures: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W6. physicochemical and molecular basis of the sensory organs; B.W9. structure of lipids and polysaccharides and their functions in cellular and extracellular structures; B.W11. function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin; B.W13. basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors; B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; C.W39. consequences of deficiency and excess of vitamins and minerals; B.U6. predict the direction of biochemical processes in relation to the energy status of cells; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Seminars: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis;	Lectures: • informative lecture, • didactic discussion Seminars: • lecture, • problem-based method, • didactic discussion, • case method, • project method Tutorials: • explanation, • talk, • problem-based method, • didactic discussion, • case method, • laboratory tests, • practical tasks, • demonstration, • project method	Lectures: Exam (MCQ) (> 60%) Mid-term test (MCQ) (> 60%) Extended observation (> 50%) Seminars: Oral or written answer (> 60%) Oral presentation (> 60%) Extended observation (> 50%) Tutorials: Exam (MCQ) (> 60%) Mid-term test (MCQ) (> 60%) Oral or written answer (> 60%) Observation of student activities during practical tasks (> 60%) Report (> 60%) Extended observation (> 50%).

		B.W9. structure of lipids and polysaccharides and their functions in cellular and extracellular structures; B.W13. basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors; B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; B.U6. predict the direction of biochemical processes in relation to the energy status of cells; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W9. structure of lipids and polysaccharides and their functions in cellular and extracellular structures; B.W11. function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin; B.W13. basic catabolic and anabolic pathways, the ways in which they are regulated and how they are influenced by genetic and environmental factors; B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; C.W38. effect of oxidative stress on cells and its importance in the pathogenesis of disease and in the processes of ageing; B.U3. calculate the molar and percentage concentrations of compounds and the concentrations of substances in iso-osmotic, mono- and multi-component solutions;		
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		B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds; B.U12. use basic laboratory and molecular techniques; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation.		
	Biophysics	Lectures: The graduate knows and understands/is able to/is ready to: B.W3. concepts of solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan equilibrium; B.W4. physical laws describing fluid flow and factors affecting vascular resistance to blood flow; B.W5. natural and artificial sources of ionising radiation and their interaction with matter; B.W6. physicochemical and molecular basis of the sensory organs; B.W7. physical basis of non-invasive imaging methods; B.W8. physical basis of selected therapeutic techniques; B.U1. use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body; B.U2. assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to:	Lectures: • informative lecture • conversational lecture • problem-oriented lecture Tutorials: • laboratory tasks • simulation methods • theoretical calculations	Lectures: Written exam ($\geq 50\%$) Extended observation ($> 50\%$) Tutorials: Written test ($\geq 60\%$) Report on the experiment (correct measurements, calculations, conclusions) ($\geq 60\%$) Extended observation ($> 50\%$)

		B.W3. concepts of solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan equilibrium; B.W4. physical laws describing fluid flow and factors affecting vascular resistance to blood flow; B.W5. natural and artificial sources of ionising radiation and their interaction with matter; B.W6. physicochemical and molecular basis of the sensory organs; B.W7. physical basis of non-invasive imaging methods; B.W8. physical basis of selected therapeutic techniques; B.U1. use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body; B.U2. assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K0 use objective sources of information.		
	Cell Biology and Cytophysiology	Lectures: The graduate knows and understands/is able to/is ready to: A.W2. cellular structures and their functional specialisations; B.W16. the modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, and examples of disruption of these processes leading to cancer and other diseases; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body;	Lectures: • informative lecture • conversational lecture • educational discussion Tutorials: • didactic discussion • practical tasks • analysis of microscopic images	Lectures: Final written exam ($\geq 60\%$) Extended observation ($> 50\%$) Tutorials: Written test: ($\geq 60\%$) Recognizing electronograms as part of the practical part of the exam (0-10 points; $\geq 60\%$) Extended observation ($> 50\%$)

		B.W18. functions and applications of stem cells in medicine; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.W2. cellular structures and their functional specialisations; B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, as well as examples of disruption of these processes leading to cancer and other diseases; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W18. functions and applications of stem cells in medicine; A.U1. operate an optical microscope, including the use of immersion; A.U2. recognise structures corresponding to organs, tissues, cells and cellular structures, describe them in microscopic images and interpret their structure and the relationship between structure and function; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation.		
	Molecular Biology	Lectures: The graduate knows and understands/is able to/is ready to: B.W11. function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin;	Lectures: • informative lecture • conversational lecture • educational discussion Tutorials: • development and improvement of practical skills • design and analysis of scientific research	Lectures: Final written test ($\geq 60\%$) Extended observation ($> 50\%$) Tutorials: Written tests ($\geq 60\%$) Reports ($\geq 60\%$) Extended observation ($> 50\%$)

		B.W12. functions of the human genome, transcriptome and proteome and the methods used to examine them, the processes of DNA replication, repair and recombination, transcription and translation and degradation of DNA, RNA and proteins, and the concepts of regulation of gene expression; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W21. processes of ageing and changes in organ function associated with ageing; C.W43. practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological disease; C.U1. chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases; C.U2. make decisions on the necessity of cytogenetic and molecular tests; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: B.W11. function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin; B.W12. functions of the human genome, transcriptome and proteome and the methods used to examine them, the processes of DNA replication, repair and recombination, transcription and translation and degradation of DNA, RNA and proteins, and the concepts of regulation of gene expression; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W21. processes of ageing and changes in organ function associated with ageing; C.W43. practical elements of molecular biology and immunology used in the	• problem-based learning	
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		diagnosis and therapy of oncological diseases; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; B.U12. use basic laboratory and molecular techniques; C.U1. chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases; C.U2. make decisions on the necessity of cytogenetic and molecular tests; C.U3. read basic genetic test results, including karyotypes; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information.		
	Human Physiology with Elements of Clinical Physiology (1/2)	Lectures: The graduate knows and understands/is able to/is ready to: B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, as well as examples of disruption of these processes leading to cancer and other diseases; B.W19. basics of stimulation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscle; B.W20. function and regulatory mechanisms of all organs and systems of the human body and the relationships between them; B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; B.U7. perform simple functional tests to assess the functioning of the human body as a stable control system (exercise stress tests) and interpret numerical data on basic physiological variables;	Lectures: • problem-based lecture with multimedia presentation • informative lecture with multimedia presentation Tutorials: • laboratory • observation • classic problem-solving • discussion • presentation	Lectures: Mid semester tests: (≥60 %) Written entrance tests: (≥60 %) Extended observation: (>50%) Tutorials: Mid semester tests : (≥60 %) Written entrance tests: (≥60 %) Lab reports: (≥60 %) Extended observation: (>50%)

		K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, as well as examples of disruption of these processes leading to cancer and other diseases; B.W19. basics of stimulation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscle; B.W20. function and regulatory mechanisms of all organs and systems of the human body and the relationships between them; B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; B.U7. perform simple functional tests to assess the functioning of the human body as a stable control system (exercise stress tests) and interpret numerical data on basic physiological variables; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation; K_K08 formulate opinions based on own assessment and observation		
	Human Physiology with Elements of Clinical Physiology (2/2)	Lectures: The graduate knows and understands/is able to/is ready to: B.W1 water and electrolyte management in biological systems;	Lectures: • problem-based lecture with multimedia presentation • informative lecture with multimedia presentation Tutorials: • laboratory	Lectures: Mid semester tests: (≥60 %) Written entrance tests: (≥60 %) Extended observation: (>50%) Exam : (≥60 %)

		B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, as well as examples of disruption of these processes leading to cancer and other diseases; B.W19. basics of stimulation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscle; B.W20. function and regulatory mechanisms of all organs and systems of the human body and the relationships between them; B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; C.W39. consequences of deficiency and excess of vitamins and minerals; C.W40. causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption; B.U7. perform simple functional tests to assess the functioning of the human body as a stable control system (exercise stress tests) and interpret numerical data on basic physiological variables; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; B.W16. modes of communication between cells and between the cell and the	• observation • classic problem-solving • discussion • presentation	Tutorials: Mid semester tests: ($\geq 60\%$) Written entrance tests: ($\geq 60\%$) Lab reports: ($\geq 60\%$) Extended observation: ($> 50\%$) Exam : ($\geq 60\%$)
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		extracellular matrix and signal transduction pathways in the cell, as well as examples of disruption of these processes leading to cancer and other diseases; B.W19. basics of stimulation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscle; B.W20. function and regulatory mechanisms of all organs and systems of the human body and the relationships between them; B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; C.W39. consequences of deficiency and excess of vitamins and minerals; C.W40. causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption; B.U7. perform simple functional tests to assess the functioning of the human body as a stable control system (exercise stress tests) and interpret numerical data on basic physiological variables; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07use objective sources of information; K_K08 formulate opinions based on own assessment and observation.		
	Scientific Research Methodology	Seminars: The graduate knows and understands/is able to/is ready to: B.W23. basic IT and biostatistical tools used in medicine; B.W26. principles of research for the advancement of medicine; D.W19. principles of evidence-based medicine; G.W8. legal regulations on medical experimentation and the conduct of scientific research involving human participants;	Seminar: • informative lecture • educational discussion Tutorials: • educational discussion • development and improvement of practical skills	Seminar: Oral or written test: (> 60%) Final exam in oral or written form: (> 60%) Tutorials: Oral or written test: (> 60%) Final exam in oral or written form: (>60%)

		K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: B.W26.principles of research for the advancement of medicine;; B.U10. classify research methodology, including a distinction between experimental and observational research as well as research sub-types, rank them according to the degree of reliability of the results provided and correctly assess the strength of scientific evidence; D.U5. critically analyse medical literature, including in that English, and draw conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
	Biostatistics	Tutorials: The graduate knows and understands/is able to/is ready to: B.W23. basic IT and biostatistical tools used in medicine; B.W24. basic methods of statistical analysis used in population-based and diagnostic research; B.U9. select an appropriate statistical test, carry out basic statistical analyses and use appropriate methods to present the results; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.	Tutorials: • explanation, • classic problem-based method, • didactic discussion, • practical exercises, • demonstration.	Tutorials: Oral or written test (≥60%) Practical test (≥60%) Extended observation (> 50%)
	Alternative Preclinical Models with Computer Analysis	Seminars: The graduate knows and understands/is able to/is ready to: A.W3. microarchitecture of tissues, extracellular matrix and organs;	Seminars: • problem-based lecture • conversational lecture • didactic discussion Tutorials: • laboratory tasks • design and analysis of scientific research • demonstration with instructions	Seminars: Final written test (≥60%) Extended observation (> 50%) Tutorials: Reports (≥60%) Extended observation (> 50%)

		B.W18. functions and applications of stem cells in medicine; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; B.U8. use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K08 formulate opinions based on own assessment and observation; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: A.W3. microarchitecture of tissues, extracellular matrix and organs; B.W18.functions and applications of stem cells in medicine; B.W23. basic IT and biostatistical tools used in medicine; C.W33. the possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; B.U5. determine the pH of a solution and the effect of pH changes on inorganic and organic compounds; B.U8. use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs;	• course tasks • computer work • computer-assisted learning: medical databases	
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		K_K08 formulate opinions based on own assessment and observation; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
Group C	Immunology	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.W2. cellular structures and their functional specialisations; C.W18. specific and non-specific mechanisms of humoral and cellular immunity; C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W21. immunology of cancer and immune-mediated diseases and the principles of immunotherapy; C.W22. genetic basis of donor and recipient selection and the principles of transplant immunology; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information. Seminars: The graduate knows and understands/is able to/is ready to: A.W2. cellular structures and their functional specialisations; C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation;	Lectures: Methods used - informative lecture activities, problem-based lecture with multimedia display activities and seminar lectures. Seminars: Round-table discussion method, conversation complemented with multi-media presentation, interpretation of the results – work in the sub-groups. Tutorial: Methods: laboratory, classical methods presenting basic problems, display (planning and performing of the basic immunodiagnostic methods, readings and proper interpretation of the results).	Lectures: Exam: test ($\geq 60\%$): Seminars: Short test ($\geq 60\%$) Extended observation (0 -1) Report (0 –1) Prolonged observation: (>50%) Tutorials: Short test ($\geq 60\%$) Extended observation (0 -1) Report (0 –1) Final credit: test ($\geq 60\%$) Extended observation: (>50%)

		B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; B.U12. use basic laboratory and molecular techniques; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W21. the immunology of cancer and immune-mediated diseases and the principles of immunotherapy; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; B.U12. use basic laboratory and molecular techniques.		
	Basics of Medical Genetics	Lectures: The graduate knows and understands/is able to/is ready to: C.W1. normal human karyotype and the different types of sex determination; C.W2. genetic causes of hereditary predisposition to cancer; C.W3. principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits, inheritance of extra-nuclear genetic information; C.W42.molecular basis of cancer and issues in cancer immunology; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.	Lectures: • informative lecture • conversational lecture • didactic discussion • case analysis Tutorials: • demonstration with instruction • course tasks • case analysis	Lectures: Credit with a grade ($\geq 60\%$) Extended observation (> 50%) Tutorials: Oral test (> 75%) Practical test (0-1) Project – presentation ($\geq 60\%$) Credit with a grade ($\geq 60\%$) Extended observation (> 50%)

		Tutorials: The graduate knows and understands/is able to/is ready to: C.W1. normal human karyotype and the different types of sex determination; C.W3. principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits, inheritance of extra-nuclear genetic information; C.W42. molecular basis of cancer and issues in cancer immunology; C.U1. chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Parasitology	Lectures: The graduate knows and understands/is able to/is ready to: C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention;	Lectures: - traditional lecture supported with multimedia techniques - interactive lecture - informative lecture Seminars: - classic problem-solving - didactic discussion - case study (form of didactic discussion) - project – presentation/ essay Tutorials: - practical classes/ microscopic observation - work with a book - project method - didactic discussion	Lectures: Final written test (≥60%) Extended observation: (≥50%) Seminars: Project work – presentation/ essay (≥60%) Extended observation: (≥50%): . Tutorials: Final written test (≥60%). Entrance tests (≥60%) Report on current (≥60%). Focused observation of the student activity while performing practical tasks (≥60%) Extended observation: (≥50%)

		C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); C.U5. identify pathogens under the microscope; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; G.W2. determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine; G.U1. describe the demographic structure of the population and, on this basis, assess and predict health problems of the population; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information. Seminars: The graduate knows and understands/is able to/is ready to: G.W2. determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine; G.U2. collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention; K_K06 promote health behaviours. Tutorials: The graduate knows and understands/is able to/is ready to: B.U8. use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences;		
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		C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. the epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. the pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; G.W2. determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine; C.U5. identify pathogens under the microscope; D.U5. critically analyse medical literature, including in English, and draw conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information.		
	Patophysiology	Lectures: The graduate knows and understands/is able to/is ready to: B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration;	Lectures: - informative lecture, - problem lecture, - seminar lecture, - case study. Tutorials: - didactic discussion, - analysis of research, - case study, - computer-assisted learning, - expository methods: film, show,	Lectures: - Tests: credit $\geq 60\%$ - Final test (verification of learning outcomes from the entire cycle): pass $\geq 60\%$ Tutorials: - Tests, pop quiz: credit ($\geq 60\%$) - Multimedia presentations: credit ($\geq 60\%$)

		C.W25. organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology; (more extensive) C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W29. physiological and pathological determinants of drug absorption, metabolism and elimination by the human body; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.W38. effect of oxidative stress on cells and its importance in the pathogenesis of disease and in the processes of ageing; C.W39. consequences of deficiency and excess of vitamins and minerals; C.W40. causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: B.W15. metabolic changes taking place in the organs and the metabolic, biochemical and molecular basis of disease and therapy;	- didactic movies and games	- Observation of the student activity during practical tasks (≥ 60%)
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		C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.W25. organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology; (more extensive) C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.W38. effect of oxidative stress on cells and its importance in the pathogenesis of disease and in the processes of ageing; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Microbiology	Lectures: The graduate knows and understands/is able to/is ready to: C.W9. genetic mechanisms of acquisition of drug resistance by microorganisms and cancer cells and their relationship to the need for individualisation of pharmacotherapy; C.W10. micro-organisms with regard to pathogenic ones and those constituting the		

		human microbiome, and invasive human forms or stages of selected parasites; C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W14. aetiology, pathogenesis, pathophysiology, routes of transmission, forms and prevention of iatrogenic infections; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); C.W17. principles of disinfection, sterilisation and aseptic management; C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U6. interpret microbiological test results; C.U10. design rational chemotherapy regimens for infections - empirical and targeted; C.U11. prepare prescription formulation records of selected medicinal substances and issue prescriptions, including e-prescriptions, in accordance with legislation; K_K02 consider patient's well-being as a priority; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Seminars:		
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		The graduate knows and understands/is able to/is ready to: C.W9. genetic mechanisms of acquisition of drug resistance by microorganisms and cancer cells and their relationship to the need for individualisation of pharmacotherapy; C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W14. aetiology, pathogenesis, pathophysiology, routes of transmission, forms and prevention of iatrogenic infections; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U5. identify pathogens under the microscope; C.U6. interpret microbiological test results; C.U10. design rational chemotherapy regimens for infections - empirical and targeted; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; K_K02 consider patient's well-being as a priority; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical		
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		professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); C.W17. principles of disinfection, sterilisation and aseptic management; C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U5. identify pathogens under the microscope; C.U6. interpret microbiological test results; C.U10. design rational chemotherapy regimens for infections - empirical and targeted; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; K_K02 consider patient's well-being as a priority; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Patomorphology	Lectures: The graduate knows and understands/is able to/is ready to: B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, as well	Lectures: • informative lecture Seminars: • case study • discussion Tutorials: • demonstration;	Lectures: Lecture test ($\geq 60\%$) Final written test ($\geq 60\%$), in two parts: Theoretical and Practical Extended observation ($> 50\%$) Seminars:

		as examples of disruption of these processes leading to cancer and other diseases; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to organismal function; B.W18. functions and applications of stem cells in medicine; C.W2. genetic causes of hereditary predisposition to cancer; C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W21. immunology of cancer and immune-mediated diseases and the principles of immunotherapy; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.W25. organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology; (more extensive) C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W42. molecular basis of cancer and issues in cancer immunology;	• classes; • discussion • laboratory classes	Colloquiums (≥60%) Entrance tests (≥60%) Extended observation (>50%) Final written test (≥60%), in two parts: Theoretical and Practical Tutorials: Final written test (≥60%), in two parts: Theoretical and Practical Extended observation (>50%)
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		C.W43. practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases. D.W16. patient rights and the concept of patient well-being; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension;		
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		7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours;		
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		5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis); E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology;	
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		4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.W34. principles of management of exposure to potentially infectious material; F.W2. causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children; G.W5. legal regulations concerning patients' rights and the Patient Ombudsman, as well as legal regulations relevant to the medical activity in the field of labour law, the basis of the medical profession and the functioning of the medical self-government; G.W7. the legal obligations of the doctor in determining the death of a patient; K_K02 consider patient's well-being as a priority; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety. Seminars:		
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		The graduate knows and understands/is able to/is ready to: A.U1. operate an optical microscope, including the use of immersion; A.U2. recognise structures corresponding to organs, tissues, cells and cellular structures, describe them in microscopic images and interpret their structure and the relationship between structure and function; B.W16. modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, and examples of disruption of these processes leading to cancer and other diseases; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W18. functions and applications of stem cells in medicine; C.W2. genetic causes of hereditary predisposition to cancer; C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W21. immunology of cancer and immune-mediated diseases and the principles of immunotherapy; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration;		
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		C.W25. organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology; (more extensive) C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W42. molecular basis of cancer and issues in cancer immunology; C.W43. practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases; C.U5. identify pathogens under the microscope; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; D.W16. patient rights and the concept of patient well-being; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies;	
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		5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea,	
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		respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.;	
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		8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.W34. principles of management of exposure to potentially infectious material; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist	
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		consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U10. recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular for symptoms such as: 1) fever; 2) cough and expectoration; 3) dyspnoea;		
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		4) nasal and ear discharge; 5) urinary disturbances; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) palpitations; 12) fainting; 13) osteoarticular pain; 14) oedema; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in stool; 19) dehydration; 20) jaundice; 21) cyanosis; 22) headache; 23) red eye syndrome; E.U12. recognise conditions requiring hospital treatment; F.W2. causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children; G.W5. legal regulations concerning patients' rights and the Patient Ombudsman, as well as legal regulations relevant to the medical activity in the field of labour law, the basis of the medical profession and the functioning of the medical self-government; G.W7. legal obligations of the doctor in determining the death of a patient; K_K02 consider patient's well-being as a priority; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety. Tutorials: The graduate knows and understands/is able to/is ready to: A.U1. operate an optical microscope, including the use of immersion;		
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		A.U2. recognise structures corresponding to organs, tissues, cells and cellular structures, describe them in microscopic images and interpret their structure and the relationship between structure and function; B.W16. the modes of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, and examples of disruption of these processes leading to cancer and other diseases; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W18. the functions and applications of stem cells in medicine; C.W2. genetic causes of hereditary predisposition to cancer; C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W21. immunology of cancer and immune-mediated diseases and the principles of immunotherapy; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.W25. organ pathology, macroscopic and microscopic pathomorphological changes and clinical implications including pathomorphological terminology; (more extensive)		
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		C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W42. molecular basis of cancer and issues in cancer immunology; C.W43. practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases C.U5. identify pathogens under the microscope; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; D.W16 E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver		
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		disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and	
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		gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W24. issues in oncology, including:		
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		1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.W34. principles of management of exposure to potentially infectious material; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock;		
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		6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U10. recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular for symptoms such as: 1) fever; 2) cough and expectoration; 3) dyspnoea; 4) nasal and ear discharge; 5) urinary disturbances; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders;		
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		10) convulsions and disturbances of consciousness; 11) palpitations; 12) fainting; 13) osteoarticular pain; 14) oedema; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in stool; 19) dehydration; 20) jaundice; 21) cyanosis; 22) headache; 23) red eye syndrome; E.U12. recognise conditions requiring hospital treatment; F.W2. causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children; G.W5. legal regulations concerning patients' rights and the Patient Ombudsman, as well as legal regulations relevant to the medical activity in the field of labour law, the basis of the medical profession and the functioning of the medical self-government; G.W7. the legal obligations of the doctor in determining the death of a patient; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient's rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment;		
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		K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Pharmacology and Toxicology	Lectures: The graduate knows and understands/is able to/is ready to: C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; C.W29. physiological and pathological determinants of drug absorption, metabolism and elimination by the human body; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.W31. major adverse drug reactions, interactions and the problem of polypragmasy; C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Seminars: The graduate knows and understands/is able to/is ready to: C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; C.W29. physiological and pathological determinants of drug absorption,	Lectures: • informative lecture • problem-based lecture • conversational lecture Seminars: • didactic discussion • decision tree • case analysis Tutorials: • didactic discussion • decision tree • case analysis	Lectures: Oral or written test (> 60%) Final exam in oral or written form (> 60%) Seminars: Oral or written test (> 60%) Final exam in oral or written form (> 60%) Tutorials: Oral or written test (> 60%) Final exam in oral or written form (> 60%)

		metabolism and elimination by the human body; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.W31. major adverse drug reactions, interactions and the problem of polypragmasy; C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U11. prepare prescription formulation records of selected medicinal substances and issue prescriptions, including e-prescriptions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; C.W29. physiological and pathological determinants of drug absorption, metabolism and elimination by the human body; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.W31. major adverse drug reactions, interactions and the problem of polypragmasy; C.W32. problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy;		
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		C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U11. prepare prescription formulation records of selected medicinal substances and issue prescriptions, including e-prescriptions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
	Gene Therapy	Lectures: The graduate knows and understands/is able to/is ready to: C.W9. genetic mechanisms of acquisition of drug resistance by microorganisms and cancer cells and their relationship to the need for individualisation of pharmacotherapy; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U12. seek reliable information on medicinal products, with particular reference to the summary of product characteristics (SmPC) and databases; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease. Seminars: The graduate knows and understands/is able to/is ready to: B.U10. classify research methodology, including a distinction between research experimental and observational with their sub-types, rank them according to the degree of reliability of the results provided and correctly assess the strength of scientific evidence; C.W9. genetic mechanisms of acquisition of drug resistance by microorganisms and cancer cells and their relationship to the	Lectures: - informative lecture - problem-based lecture Seminars: - didactic discussion - group work - individual work Tutorials: - practical/laboratory tasks - case study - didactic discussion - individual work - group work - computer-assisted teaching, such as medical databases	Lectures: Final written test ($\geq 60\%$) Extended observation (> 50%) Seminars: Oral test (>75%) Extended observation (> 50%) Tutorials: Report (> 75%) Task completion (>75%) Extended observation (> 50%)

		need for individualisation of pharmacotherapy; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U12. seek reliable information on medicinal products, with particular reference to the summary of product characteristics (SmPC) and databases; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease. Tutorials: The graduate knows and understands/is able to/is ready to: B.U10. classify research methodology, including a distinction between experimental and observational research with research sub-types, rank them according to the degree of reliability of the results provided and correctly assess the strength of scientific evidence; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U12. seek reliable information on medicinal products, with particular reference to the summary of product characteristics (SmPC) and databases; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
	Regenerative Medicine	Lectures: The graduate knows and understands/is able to/is ready to:	Lectures: • informative lecture • conversational lecture • educational discussion	Lectures: Final written test (>60%) Extended observation (> 50%)

		A.W3. microarchitecture of tissues, extracellular matrix and organs; B.W17. processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their relevance to functions of the body; B.W18. functions and applications of stem cells in medicine; B.W26. principles of research for the advancement of medicine; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; F.W21. principles for promoting tissue and cell donation, indications for transplantation of blood-forming organs, tissues and haematopoietic cells, complications of treatment and principles for long-term care after transplantation; B.U8. use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences; D.U5. critically analyse medical literature, including that English, and draw conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to:	• analysis of case reports Tutorials: • laboratory exercises • educational discussion • analysis of case reports • design and analysis of scientific research	Tutorials: Written test, Task realization: report preparation, Practical test (>60%) Extended observation (> 50%)
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		B.W26. principles of research for the advancement of medicine. C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; B.W18. functions and applications of stem cells in medicine; C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; F.W21. principles for promoting tissue and cell donation, indications for transplantation of blood-forming organs, tissues and haematopoietic cells, complications of treatment and principles for long-term care after transplantation; G.W8. legal regulations on medical experimentation and the conduct of scientific research involving human participants; G.W9. legislation on transplantation, artificial procreation, abortion, aesthetic treatments, palliative care, persistent therapy, mental illness, infectious diseases; G.W11. basic pharmaceutical law regulations, including the principles of marketing medicinal and medical products, issuing prescriptions, including e-prescriptions, reimbursement of medicines, cooperation between the doctor and the pharmacist, reporting of adverse drug reactions; B.U8. use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences; B.U10. classify research methodology, including a distinction between research experimental and observational with their sub-types, rank them according to the degree of reliability of the results provided and correctly assess the strength of scientific evidence; B.U11. plan and carry out scientific research and interpret the results and formulate conclusions;		
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		D.U5. critically analyse medical literature, including that English, and draw conclusions; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Tumor Genetics with Elements of Genetic Diagnostics	Lectures: The graduate knows and understands/is able to/is ready to: C.W2. genetic causes of hereditary predisposition to cancer; W2: characterizes the genetic determinants of the most common monogenic, multigenic and multifactorial diseases (C.W5), C.W8. genetic diagnostic methods and the basic indications for their application; C.W26. pathogenesis of diseases, including genetic and environmental determinants ; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.W42. molecular basis of cancer and issues in cancer immunology; C.W43. practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases; E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology;	Lectures: Informative lecture Analysis of case reports Seminars: Conversational lecture Educational discussion Analysis of case reports Tutorials: demonstrations with added instructions development and improvement of practical skills analysis of case reports	Lectures: Final test ($\geq 60\%$) Seminars: Oral test ($> 75\%$); Extended observation ($> 50\%$) Tutorials: Oral test ($> 75\%$); Extended observation ($> 50\%$)

		4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.W40. possibilities and limitations of laboratory tests. Seminars: The graduate knows and understands/is able to/is ready to: C.W2. genetic causes of hereditary predisposition to cancer; W2: characterizes the genetic determinants of the most common monogenic, multigenic and multifactorial diseases (C.W5), C.W8. genetic diagnostic methods and the basic indications for their application; C.W26. pathogenesis of diseases, including genetic and environmental determinants; C.W33. possibilities and types of biological, cellular, gene and targeted therapies for specific diseases; C.W42. molecular basis of cancer and issues in cancer immunology; C.U2. make decisions on the necessity of cytogenetic and molecular tests ;		
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		C.U3 read basic genetic test results, including karyotypes; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; E.U19. plan diagnostic, therapeutic and preventive management of cancer treatment on the basis of test results and medical documentation provided; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: C.U2. make decisions on the necessity of cytogenetic and molecular tests; C.U3 read basic genetic test results, including karyotypes; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; E.U19. plan diagnostic, therapeutic and preventive management of cancer treatment on the basis of test results and medical documentation provided; K_K03 observe medical confidentiality and other patient rights ; K_K02 consider patient's well-being as a priority ; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of		
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		professional activities, including self and other people's safety .		
Group D	Interpersonal Communication			
	Medical English – course I year sem. II			
	Medical English – course II year sem. III			
	Medical English – course II year sem. IV			
	Medical Communication II year			
	Medical Communication III year			
	Medical Ethics			
	Medical Sociology with Elements of Professionalism			
	History of Medicine with Elements of Philosophy			
	Methods of Coping with Stress			
	Effective Learning and Methods of Effective Learning			

Group E	Introduction to Internal Diseases	Lectures: The graduate knows and understands/is able to/is ready to: B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; B.W25. potential of modern telemedicine as a tool for assisting the doctor; C.W40. causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption. Seminars: The graduate knows and understands/is able to/is ready to: B.W22. basic quantitative parameters describing the capacity of individual systems and organs, including ranges of norms and demographic factors affecting the value of these parameters; B.W25. potential of modern telemedicine as a tool for assisting the doctor; C.W40. causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption. Tutorials: The graduate knows and understands/is able to/is ready to: A.U3. explain the anatomical basis of the physical examination; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U3. take a medical history in a life-threatening situation using the following scheme:	Seminars: • conversational lecture • problem lecture • didactic discussion Tutorials: • case analysis • clinical exercises • didactic discussion • simulation methods Lectures: informative lecture	Tutorials: Practical test (0-25 points, 5 questions, 0-5 points each) Lectures and seminars: Oral test (0-25 points; 5 questions, 0-5 points each)
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		SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure, arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade;		
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		18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; E.U15. use personal protective equipment appropriate to the clinical situation; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information.		
	Introduction to Paediatrics	Lectures: The graduate knows and understands/is able to/is ready to: E.W1. principles of natural feeding, healthy child nutrition and obesity prevention, as well as nutritional modifications resulting from disease; E.W2. principles for the prevention of childhood illnesses, including screening, balance examinations and immunisation; E.U8. carry out balance examinations, including comparing anthropometric and blood pressure measurements with data on centile grids, as well as assess the progression of puberty; E.U13. qualify the patient for preventive vaccination; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;	Lectures: • informative lecture • problem lecture • conversational lecture • design and analysis of scientific research Tutorials: • practical and theoretical taskss at the patient's bedside, • demonstration and analysis of clinical cases	Practical test (scoring system 0-12 points >66%) Theoretical test (>60%)

		3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.U10. recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular for symptoms such as:		
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		1) fever; 2) cough and expectoration; 3) dyspnoea; 4) nasal and ear discharge; 5) urinary disturbances; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) palpitations; 12) fainting; 13) osteoarticular pain; 14) oedema; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in stool; 19) dehydration; 20) jaundice; 21) cyanosis; 22) headache; 23) red eye syndrome; E.W6. basic foetal diagnosis and therapy; E.U12. recognise conditions requiring hospital treatment; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema;		
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		4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; E.W4. issues of the abused and sexually exploited child and the principles of intervention with such patients; D.W13. forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the principles for dealing with suspected violence, including the "Blue Card" (<i>Niebieska Karta</i>) procedure;	
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		D.W1. psycho-physical development of the human being from birth to death, including the specific characteristics of physical, emotional, cognitive and social development; Tutorials: The graduate knows and understands/is able to/is ready to: E.W1. principles of natural feeding, healthy child nutrition and obesity prevention, as well as nutritional modifications resulting from disease; E.U2. interview the child and their carers, using skills on the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U3. take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness; E.U6. perform a complete and focused physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation, including: 1) general paediatric; 2) neurological; 3) musculoskeletal system; 4) ophthalmology; 5) otolaryngology; E.U8. carry out balance examinations, including comparing anthropometric and blood pressure measurements with data on centile grids, as well as assess the progression of puberty; E.U10. recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement		
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		therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular for symptoms such as: 1) fever; 2) cough and expectoration; 3) dyspnoea; 4) nasal and ear discharge; 5) urinary disturbances; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) palpitations; 12) fainting; 13) osteoarticular pain; 14) oedema; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in stool; 19) dehydration; 20) jaundice; 21) cyanosis; 22) headache; 23) red eye syndrome; E.U11. recognise the symptoms of hazardous and harmful use of alcohol and problematic use of other psychoactive substances, symptoms of psychoactive substance dependence and behavioural addictions, and propose appropriate therapeutic and medical treatment; E.U12. recognise conditions requiring hospital treatment; E.U13. qualify the patient for preventive vaccination; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter;		
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		2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; E.U15. use personal protective equipment appropriate to the clinical situation; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; E.U27. communicate with patients from groups at risk of economic or social exclusion, while respecting their dignity; E.U30. apply the principles of providing feedback (constructive, non-judgmental, descriptive) as part of team cooperation;		
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		E.U31. accept, explain and analyse your own role and responsibilities within the team and recognise your role as a doctor in the team; E.U33. discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity; E.U34. use the following protocols (e.g. when transferring patient care, ordering or providing patient consultations): 1) ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury suspected), S (Symptoms/Signs), T (Treatment/Time); 2) RSVP/ISBAR (R (Reason), S (Story) V (Vital signs), P (Plan), I (Introduction), S (Situation), B (Background), A (Assessment), R (Recommendation); K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K06 promote health behaviours; K_K07 use objective sources of information.		
	Laboratory Diagnostics	Lectures: The graduate knows and understands/is able to/is ready to: E.W40. possibilities and limitations of laboratory tests;	Lectures: · informative lecture · problem lecture · conversational lecture · didactic discussion · case analysis	Lectures: Final colloquium (≥60%) Tutorials: Final colloquium (≥60%) Prolonged follow-up (>50%)

		E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: E.W40. possibilities and limitations of laboratory tests; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; B.U12. use basic laboratory and molecular techniques; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.	Tutorials: · laboratory tasks - case analysis	
	Clinical Genetics and Prenatal Diagnostics	Seminars: The graduate knows and understands/is able to/is ready to: C.W1. normal human karyotype and the different types of sex determination; C.W2. genetic causes of hereditary predisposition to cancer; C.W3. principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits, inheritance of extra-nuclear genetic information; C.W8. genetic diagnostic methods and the basic indications for their application; E.W36. the causes, symptoms, principles of diagnosis and therapeutic management of the most common genetically determined diseases in children and adults; C.U1. chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases; C.U2. make decisions on the necessity of cytogenetic and molecular tests; C.U3. read basic genetic test results, including karyotypes; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test	Seminars: · informative lecture · conversational lecture · didactic discussion · case analysis Tutorials: · demonstration with instruction · subject exercises · case analysis	Oral test (> 75%) Final colloquium (≥60%) Extended observation (>50%)

		for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: C.W1. normal human karyotype and the different types of sex determination; C.W2. genetic causes of hereditary predisposition to cancer; C.W3. principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits, inheritance of extra-nuclear genetic information; C.W8. genetic diagnostic methods and the basic indications for their application; E.W36. causes, symptoms, principles of diagnosis and therapeutic management of the most common genetically determined diseases in children and adults; C.U1. chart and analyse pedigrees and identify clinical and pedigree features suggestive of a genetic basis for diseases; C.U2. make decisions on the necessity of cytogenetic and molecular tests; C.U3read basic genetic test results, including karyotypes; C.U4. determine the genetic risk based on the pedigree and the result of a genetic test for chromosome aberrations, genomic rearrangements, single-gene and multifactorial diseases; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information;		
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		K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Clinical Pharmacology	Seminars: The graduate knows and understands/is able to/is ready to: C.W28. different groups of medicinal products, their mechanisms and effects of action, their basic indications and contraindications and their basic pharmacokinetic and pharmacodynamic parameters; C.W29. physiological and pathological determinants of drug absorption, metabolism and elimination by the human body; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.W31. major adverse drug reactions, interactions and the problem of polypragmasy; C.W32. the problem of drug resistance, including multidrug resistance, and the principles of rational antibiotic therapy; C.U8. perform simple pharmacokinetic calculations; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U10. design rational chemotherapy regimens for infections - empirical and targeted; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to:	Seminars: • informative seminar • problem seminar • case analysis Tutorials: • didactic discussion • clinical exercises • case analysis • design and analysis of scientific research • computer-assisted learning • expository methods: film, show	Seminars: Final written or oral assessment ($\geq 60\%$) Extended observation ($>50\%$) Tutorials: Final written or oral assessment ($\geq 60\%$) Extended observation ($>50\%$)

		C.W34. basic concepts of general toxicology; C.W35. groups of drugs which, if abused, can lead to poisoning; C.W37. basic principles of diagnostic and therapeutic management of poisoning; E.W8. principles of pharmacotherapy in patients with renal failure and renal replacement therapy; E.W41. indications for the implementation of monitored therapy; G.W11. basic pharmaceutical law regulations, including the principles of marketing medicinal and medical products, issuing prescriptions, including e-prescriptions, reimbursement of medicines, cooperation between the doctor and the pharmacist, reporting of adverse drug reactions; C.U11. prepare prescription formulation records of selected medicinal substances and issue prescriptions, including e-prescriptions, in accordance with legislation; C.U12. seek reliable information on medicinal products, with particular reference to the summary of product characteristics (SmPC) and databases; C.U13. estimate the toxicological risks in specific age groups and in states of hepatic and renal failure, and prevent drug poisoning; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
	Cardiology	Lectures: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension;	Seminars: • informative seminar • conversation seminar • didactic discussion • case analysis Tutorials: • demonstration with instruction • subject exercises • case analysis • simulation methods (case study; simulated patient)	Lectures: Final colloquium ($\geq 60\%$) Tutorials: Oral test ($> 75\%$) Practical test (0-1 scoring system) Final colloquium ($\geq 60\%$) Extended observation ($> 50\%$)

		2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies,	
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		erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis); K_K03 observe medical confidentiality and other patient rights. Tutorials: The graduate knows and understands/is able to/is ready to: F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological;	
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		3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration;		
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		K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the diseases; K_K06 promote health behaviours.		
	Nephrology	Seminars: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W8. principles of pharmacotherapy in patients with renal failure and renal replacement therapy; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a	Seminars: - presentation - problem discussion - questions and answers session Tutorials: - clinical case study - observation - demonstration of taking history and physical examination - simulated case	Seminars: Final test (≥60%) Tutorials: Practical assessment (0-1 system) Extended observation (0-1 system)

		diagnosis in the most common diseases of adults and children; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U13. estimate the toxicological risks in specific age groups and in states of hepatic and renal failure, and prevent drug poisoning. E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 8) oedema; 12) dyspnoea; 26) urinary disturbances; 27) haematuria and proteinuria; 38) dehydration and overhydration; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs;		
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		K_K07. use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W8. principles of pharmacotherapy in patients with renal failure and renal replacement therapy; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a		
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		diagnosis in the most common diseases of adults and children; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; C.U13. estimate the toxicological risks in specific age groups and in states of hepatic and renal failure, and prevent drug poisoning. E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 8) oedema; 12) dyspnoea; 26) urinary disturbances; 27) haematuria and proteinuria; 38) dehydration and overhydration; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and		
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		monitoring them using a cardiomonitor and pulse oximeter; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K01. establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02. consider patient's well-being as a priority; K_K03. observe medical confidentiality and other patient rights; K_K11. accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Endocrinology and Diabetology	Lectures: The graduate knows and understands/is able to/is ready to: C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W40. the causes and consequences of inadequate nutrition, including prolonged under- and over-nutrition and the use of unbalanced diets and disorders of digestion and absorption; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes,	Lectures: - Conventional lecture Seminars: - case-report study - discussion - observation - presentation Tutorials: - clinical tutorials,	Lectures: - Final multiple choice test (>60%) Seminars: - final multiple choice test (>60%) Tutorials: - final multiple choice test (>60%) - Extended observation (> 60%)

		various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; Seminars: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: E.U12. recognise conditions requiring hospital treatment;		
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		K_K05. identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment		
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		and assess the indications for specialist consultation, particularly for symptoms such as: E.U12. recognise conditions requiring hospital treatment; E.U21. conduct patient health education, including nutrition education tailored to individual needs; E.U14. perform medical procedures and treatments, including: 15) strip testing, including glucose measurement using a glucometer; H.U8. perform strip tests, including measuring glucose concentration using a glucometer; H.U5. perform intravenous, intramuscular and subcutaneous administration of the drug; K_K01. establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K03. observe medical confidentiality and other patient rights; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs.		
	Allergology and Clinical Immunology	Lectures: The graduate knows and understands/is able to/is ready to: C.W20. types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation; C.W29. physiological and pathological determinants of drug absorption,	Lectures: - informative lecture Seminars: - didactic discussion - case studies - informative lecture	Lectures: Test exam ($\geq 60\%$) Seminars: Test exam ($\geq 60\%$) Tutorials:

		metabolism and elimination by the human body; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.W31. major adverse drug reactions, interactions and the problem of polypharmacy; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; Seminars: The graduate knows and understands/is able to/is ready to: C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; D.U10. use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation	- round table method Tutorials: - clinical practice	Practical exam(>=60%)
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		(encouraging the interlocutor to speak) as appropriate; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 12) dyspnoea; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 21) constipation and diarrhoea; E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter;		
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		2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; Tutorials: The graduate knows and understands/is able to/is ready to: C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; D.U10. use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever;		
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		2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 12) dyspnoea; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 21) constipation and diarrhoea; E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods;		
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		K_K01. establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02. consider patient's well-being as a priority; K_K03. observe medical confidentiality and other patient rights; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs; K_K07. use objective sources of information; K_K09. implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11. accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Gastroenterology	Lectures: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 9) water-electrolyte and acid-base disorders (dehydration states, conductive	Lectures: - informative lecture - conversational lecture - educational discussion - analysis of case reports Seminars: - conversational lecture - educational discussion - analysis of case reports	Lectures: - Final colloquium ($\geq 60\%$): W1 – W2, U1 – U3, U7 – U8 - Oral test ($> 75\%$) - Extended observation ($> 50\%$) Seminars: - Final colloquium ($\geq 60\%$) - Oral test ($> 75\%$) - Extended observation

		states, electrolyte disturbances, acidosis and alkalosis). E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 9) main scales and classifications used in oncology; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment	Tutorials: - demonstrations with added instructions - development and improvement of practical skills - analysis of case reports - utilization of medical simulation methods	(> 50%) Tutorials: - Oral test (> 75%) - Practical test (scoring system: 0-1) - Extended observation (> 50%)
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		and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 7) disturbance of consciousness, including fainting; 8) oedema; 10) coughing and expectoration; 11) haemoptysis; 14) chest pain; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 38) dehydration and overhydration; E.U32. obtain information from team members, respecting their diverse opinions and specialized competences, and take this information into account in the patient's diagnostic and therapeutic plan;		
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		E.U33. discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity; K_K03. observe medical confidentiality and other patient rights. Seminars: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis).; E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology;		
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		5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 9) main scales and classifications used in oncology; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 7) disturbance of consciousness, including fainting;		
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		8) oedema; 10) coughing and expectoration; 11) haemoptysis; 14) chest pain; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 38) dehydration and overhydration; E.U32. obtain information from team members, respecting their diverse opinions and specialized competences, and take this information into account in the patient's diagnostic and therapeutic plan; E.U33. discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity; K_K03. observe medical confidentiality and other patient rights; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to:		
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		E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 9) main scales and classifications used in oncology; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; E.U1. interview an adult, including an older person, using skills relating to the		
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		content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 7) disturbance of consciousness, including fainting; 8) oedema; 10) coughing and expectoration; 11) haemoptysis; 14) chest pain; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea;		
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		22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 38) dehydration and overhydration; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and consequences of the decision) and obtain patient's conscious consent; E.U27. communicate with patients from groups at risk of economic or social exclusion, while respecting their dignity; E.U31. accept, explain and analyse your own role and responsibilities within the team and recognise one's role as a doctor in the team; E.U32. obtain information from team members, respecting their diverse opinions and specialized competences, and take this information into account in the patient's diagnostic and therapeutic plan; E.U33. discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity; E.U34. use the following protocols (e.g. when transferring patient care, ordering or providing patient consultations): 1) ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury), S (Symptoms/Signs), T (Treatment/Time); 2) RSVP/ISBAR (R (Reason), S (Story), V (Vital signs), P (Plan)/I (Introduction S (Situation), B (Background), A (Assessment), R (Recommendation).		
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		K_K03. observe medical confidentiality and other patient rights; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs.		
	Haematology	Seminars: The graduate knows and understands/is able to/is ready to: F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology	Seminars: • Case studies • Questions & Answers • Didactic discussion Tutorials: • Clinical tasks • Case studies	Passing the seminars test>=60%: Passing the tutorials practical test>=60%:

		i) ENT, j) gynaecology, obstetrics and urology; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; F.W21. principles for promoting tissue and cell donation, indications for transplantation of blood-forming organs, tissues and haematopoietic cells, complications of treatment and principles for long-term care after transplantation; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and		
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		gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.;		
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		8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis); D.U9. describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour; E.U3. take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness); C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; F.U9. conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC); F.U11. perform basic life support in adults, including using an automatic external defibrillator, in accordance with ERC guidelines; F.U14. recognise the most common symptoms indicating an abnormal course of pregnancy and postpartum, apply and interpret diagnostic tests, perform differential diagnosis, implement therapy, monitor treatment effects and evaluate indications for specialist consultation, especially in the case of abdominal pain, uterine contractions, vaginal bleeding,		
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		abnormal heart rate and foetal movement, hypertension; F.U6. temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing; F.U8. treat external bleeding; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: F.W10. most common life-threatening conditions in children and adults and the		
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		management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; F.W21. principles for promoting tissue and cell donation, indications for transplantation of blood-forming organs, tissues and haematopoietic cells, complications of treatment and principles for long-term care after transplantation; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular		
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		diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia,	
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		blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis); D.U9. describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour; E.U3. take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness); C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; F.U9. conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC);		
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		F.U11. perform basic life support in adults, including using an automatic external defibrillator, in accordance with ERC guidelines; F.U14. recognise the most common symptoms indicating an abnormal course of pregnancy and postpartum, apply and interpret diagnostic tests, perform differential diagnosis, implement therapy, monitor treatment effects and evaluate indications for specialist consultation, especially in the case of abdominal pain, uterine contractions, vaginal bleeding, abnormal heart rate and foetal movement, hypertension; F.U6. temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing; F.U8. treat external bleeding; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information;		
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		K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Rheumatology	Lectures: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; Seminars: The graduate knows and understands/is able to/is ready to: E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; D.U10. use open and closed questions, paraphrasing, clarification, internal and	Lectures: - informative lecture Seminars: - Didactic discussion Tutorials: - clinical tutorials - case study - observation	Lectures: - test ($\geq 60\%$) Seminars: - test ($\geq 60\%$) Tutorials: Practical exam ($\geq 60\%$)

		final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 4) musculoskeletal; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting;		
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		8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache;		
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		32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; E.U18. maintain patient medical records, also in electronic form, in accordance with the law. Tutorials: The graduate knows and understands/is able to/is ready to: E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; D.U10. use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation		
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		(encouraging the interlocutor to speak) as appropriate; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 4) musculoskeletal; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash;		
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		10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis;		
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		34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K01. establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02. consider patient's well-being as a priority; K_K03. observe medical confidentiality and other patient rights; K_K04. take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs; K_K07. use objective sources of information;		
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		K_K09. implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Dermatology and Venereology	Lectures: The graduate knows and understands/is able to/is ready to: A.W3.describe and interpret the microarchitecture of tissues, extracellular matrix and organs in the context of the physiological condition of the skin and dermatological diseases, enabling the identification, diagnosis and treatment of skin diseases; C.W17.organization, equipment and principles of work in sterile conditions of cell culture laboratory and applies the principles of disinfection, sterilization and aseptic procedures E.W33.describe the environmental and epidemiological conditions, causes, symptoms and principles of diagnostic, therapeutic and preventive procedures of the most common dermatological and sexually transmitted diseases of bacterial, viral, parasitic and fungal aetiology and their complications E.W35.discuss environmental and epidemiological conditions, causes, symptoms and principles of diagnosis and therapeutic procedures in the most common dermatological and sexually transmitted diseases; E.W24.present the environmental and epidemiological conditions of skin cancers, pre-cancerous conditions and hyperplastic lesions;	Lectures: • informative lecture • conversation lecture • case analysis Exercises: • course tasks • case analysis • analysis and interpretation of diagnostic test results • didactic discussion and work with a dermatological atlas • demonstration with instruction • simulation methods • assisting the doctor during the diagnostic and treatment process	Lectures: Final test $\geq 60\%$ Extended observation > 50% Tutorials: Entrance test $\geq 60\%$ Practical test 0-1 scoring Extended observation > 50%

		K_K05.identifiy and recognise own limitations and self-assesses educational deficits and needs ; K_K07.use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.W3.describe and interpret the microarchitecture of tissues, extracellular matrix and organs in the context of the physiological condition of the skin and dermatological diseases, enabling the identification, diagnosis and treatment of skin diseases; C.W17.organization, equipment and principles of work in sterile conditions of cell culture laboratory and applies principles of disinfection, sterilization and aseptic procedures; E.W33.describes the environmental and epidemiological conditions, causes, symptoms and principles of diagnostic, therapeutic and preventive procedures of the most common dermatological and sexually transmitted diseases of bacterial, viral, parasitic and fungal aetiology and their complications; E.W35.discuss environmental and epidemiological conditions, causes, symptoms and principles of diagnosis and therapeutic procedures in the most common dermatological and sexually transmitted diseases; E.W24.present the environmental and epidemiological conditions of skin cancers, pre-cancerous conditions and hyperplastic lesions; B.U11. plan and carry out scientific research, interpret its results and formulates		
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		conclusions as well as perform selected cell culture techniques: passaging, counting and assessing the viability of skin cells in <i>in vitro</i> culture; C.U7. properly diagnose the patient in terms of the ability to connect images of tissue and organ damage with clinical symptoms of the disease, patient history and laboratory test results, enabling accurate diagnosis of the most common skin and sexually transmitted diseases in adults and children; C.U9. correctly select medications and appropriately determine their doses in dermatological and sexually transmitted diseases; E.U1. collect a focused interview with an adult, including a senior, leading to the correct diagnosis of the most common dermatoses and sexually transmitted diseases, use skills related to the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; E.U5. conduct a complete and focused physical examination of an adult, including dermatological examination of patients with the most common dermatological and sexually transmitted diseases; E.U12. recognise conditions requiring treatment in hospital conditions ; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; F.U1. wash hands surgically, put on sterile gloves, prepare the surgical field according to aseptic rules and assist in collecting and securing material (skin biopsies for diagnostic examination); K_K01. establish and maintain deep and respectful contact with the patient, as well as show understanding for ideological and cultural differences;		
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		K_K03.respect medical confidentiality and patient's rights; K_K05.notice and recognise own limitations and self-assess educational deficits and needs; K_K07.use objective sources of information; K_K09.implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Pulmonology with Elements of Pulmonary Oncology	Lectures: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditioning of the most common respiratory diseases; E.W7. causes, symptoms, diagnostic process and therapeutic management of the most common respiratory diseases. Seminars: The graduate knows and understands/is able to/is ready to: E.W7. environmental and epidemiological conditioning of the most common respiratory diseases; E.W7. causes, symptoms, diagnostic process and therapeutic management of chronic obstructive pulmonary disease; E.W7. causes, symptoms, diagnostic process and therapeutic management of asthma; E.W7. causes, symptoms, diagnostic process and therapeutic management of bronchitis;	1. Lectures: a) Conversational lecture b) Informative lecture 2. Seminar: a) idea exchanges b) the classic problem-based method c) case study d) didactic discussion 3. Tutorials: a) practice b) presentations	1. Tutorials credit >60% Extended observation >50 % 2. Seminars credit >60% 3. Final test exam > 60%

		E.W7. causes, symptoms, diagnostic process and therapeutic management of respiratory infections ; E.W7. causes, symptoms, diagnostic process and therapeutic interstitial lung diseases; E.W7. causes, symptoms, diagnostic process and therapeutic management of diseases of the pleura; E.W7. causes, symptoms, diagnostic process and therapeutic management of mediastinal disease; E.W7. causes, symptoms, diagnostic process and therapeutic management of obstructive and central sleep apnea, E.W7. causes, symptoms, diagnostic process and therapeutic management of acute and chronic respiratory failure, E.W24. basis of early diagnosis of cancer and the principles of screening in oncology as well as the causes, symptoms, methods of diagnosis and therapeutic management of the most common problems of palliative medicine in neoplastic diseases of the respiratory system; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests essential to diagnose the most common respiratory diseases; E.U9. plan diagnostic, therapeutic and preventive procedures in the event of respiratory diseases; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to:		
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		E.U1. perform medical history of the adult patients; E.U5. perform a full physical examination of the adult patients; E.U9. perform differential diagnosis of the most common respiratory diseases of adult patients; E.U9. recognise life-threatening diseases in pulmonology; E.U9. plan the diagnostic process, therapeutic management and preventive activities in case of respiratory diseases; E.U9. interpret laboratory tests and identify the causes of abnormalities; E.U12. qualify a patient for home treatment and hospitalization; E.U9. propose a rehabilitation program in the most common respiratory diseases and perform it; E.U9. identify physiological and pathological structures on radiological pictures performed in patients with respiratory diseases; E.U14. perform basic procedures and medical treatments, including: a) monitoring of vital signs using a cardio-monitor, oximeter b) spirometry, oxygen therapy, non-invasive ventilation c) collection of swabs from the nose and throat, thoracentesis d) performs measurement of peak expiratory flow; E.U14. assist in performing the following procedures and medical treatments: a) draining the pleura b) pericentesis c) fine-needle biopsy d) intradermal tests and results interpretation; E.U9. plan specialist consultations; E.U18. maintain patient medical records, also in electronic form, in accordance with the law;		
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		E.U.19. plan diagnostic, therapeutic and preventive procedures in the event of oncological diseases of the respiratory system; K_K01. establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02. consider patient's well-being as a priority; K_K03. observe medical confidentiality and other patient's rights; K_K05. identify and recognise own limitations and to self-assess educational deficits and needs.		
	Paediatrics	Lectures: The graduate knows and understands/is able to/is ready to: E.W3. present the importance of environmental influences and genetic factors, epidemiology, symptoms and principles of diagnosis and treatment of the most common: • chronic respiratory diseases (tuberculosis, cystic fibrosis) (E.W3 p.3); • childhood cancer diseases (E.W3 p.4); • primary and secondary immunodeficiencies (E.W3 p.4); • rare diseases (including metabolic diseases, including the most common enzymopathies: galactosemia, fructosemia, phenylketonuria); E.W33 p.1,2,4,5. outline the risk of infections (especially bacterial, viral and fungal) in children with primary and acquired immunodeficiencies or chronic	Lectures: • conventional lecture Seminars: • panel discussion • case analysis • problem-based learning Tutorials: • clinical tutorials • case studies • medical simulation methods	Lectures: Theoretical test exam $\geq 60\%$ Seminars: • Theoretical test exam $\geq 60\%$ • Practical exam $\geq 60\%$ Tutorials: • Practical exam $\geq 60\%$ • Extended observation > 50%

		diseases, provides possible symptoms, principles of diagnosis and treatment; E.W36. list the epidemiology, risk, modes of inheritance and causes, symptoms, principles of diagnosis and therapeutic options in the most common hereditary diseases and syndromes (including spherocytosis, haemophilia, phakomatoses); Seminars: The graduate knows and understands/is able to/is ready to: E.W3. present the importance of environmental influences and genetic factors, epidemiology, symptoms and principles of diagnosis and treatment of the most common: • metabolic disorders regarding acid-base and water-electrolyte metabolism (including rickets, tetany) (E.W3 point 1); • heart defects and cardiological diseases (heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathies, cardiac arrhythmias and syncope, heart failure, arterial hypertension, pulmonary hypertension) (E.W3 p.2); • respiratory diseases (bronchitis, bronchiectasis, respiratory infections, pneumonia and pleurisy) (E.W3 p.3); • diseases of the blood and hematopoietic system (anaemia, bleeding disorders, bone marrow failure) (E.W3 p.4); • childhood cancers (leukaemias and lymphomas, solid tumours		
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		of childhood) and phakomatoses (E.W3 p.4); • kidney and urinary system diseases (acute kidney injury, chronic kidney disease, urinary tract infections, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetically determined kidney diseases, renal hypertension) (E.W3 p.6); • endocrine system disorders (growth disorders, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, puberty disorders, gonadal dysfunction) (E.W3 p.7); • non-infectious diseases of the nervous system (cerebral palsy, seizures, epilepsy) (E.W3 p.8); • some autoinflammatory diseases (systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis) (E.W3 p.10) E.W1. explain the principles of child nutrition in selected deficiency diseases, metabolic syndromes, diabetes; E.W32. list the aetiological factors of the most common respiratory infections and other acute infections in children depending on location and age, and determine the need for hospitalization and notification of epidemiological services about the infection; E.W33 p.1,2,4,5. outline the risk of infections (especially bacterial, viral and fungal) in children with primary and acquired immunodeficiencies or chronic diseases, provide possible		
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		symptoms, principles of diagnosis and treatment; E.W36. list the epidemiology, risk, modes of inheritance and causes, symptoms, principles of diagnosis and therapeutic options in the most common hereditary diseases and syndromes (including spherocytosis, haemophilia, phakomatoses). Tutorials: The graduate knows and understands/is able to/is ready to: E.W3. present the importance of environmental influences and genetic factors, epidemiology, symptoms and principles of diagnosis and treatment of the most common: • chronic respiratory diseases (tuberculosis, cystic fibrosis) (E.W3 p.3); • childhood cancer diseases (E.W3 p.4); • primary and secondary immunodeficiencies (E.W3 p.4); • rare diseases (including metabolic diseases, including the most common enzymopathies: galactosemia, fructosemia, phenylketonuria), E.W3. present the importance of environmental influences and genetic factors, epidemiology, symptoms and principles of diagnosis and treatment of the most common: • metabolic disorders regarding acid-base and water-electrolyte metabolism (including rickets, tetany) (E.W3 point 1);		
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		• heart defects and cardiological diseases (heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathies, cardiac arrhythmias and syncope, heart failure, arterial hypertension, pulmonary hypertension) (E.W3 p.2); • respiratory diseases (bronchitis, bronchiectasis, respiratory infections, pneumonia and pleurisy) (E.W3 p.3); • diseases of the blood and hematopoietic system (anaemia, bleeding disorders, bone marrow failure) (E.W3 p.4); • childhood cancers (leucaemias and lymphomas, solid tumours of childhood) and phakomatoses (E.W3 p.4); • kidney and urinary system diseases (acute kidney injury, chronic kidney disease, urinary tract infections, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetically determined kidney diseases, renal hypertension) (E.W3 p.6); • endocrine system disorders (growth disorders, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, puberty disorders, gonadal dysfunction) (E.W3 p.7); • non-infectious diseases of the nervous system (cerebral palsy, seizures, epilepsy) (E.W3 p.8); • some autoimmune diseases (systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis) (E.W3 p.10).		
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		E.W33 p.1,2,4,5. outline the risk of infections (especially bacterial, viral and fungal) in children with primary and acquired immunodeficiencies or chronic diseases, provide possible symptoms, principles of diagnosis and treatment; E.W36. list the epidemiology, risk, modes of inheritance and causes, symptoms, principles of diagnosis and therapeutic options in the most common hereditary diseases and syndromes (including spherocytosis, haemophilia, phakomatoses); E.U2. establish contact with a small child and teenager using a method of communication appropriate to the child's age and obtain information about the patient's well-being and ailments; E.U2. collect a medical history with a child with difficult contact and with parents in a stressful situation; E.U6. plan and conduct a physical examination dependently on the child's age, general condition and leading complaints and diagnosis, including elements of a neurological, orthopaedic, laryngological or surgical examination; E.U8. perform anthropometric measurements, assess the child's physical and motor development, sexual maturity and nutritional status using appropriate indicators, percentile charts and norm tables; E.U8. perform additional physical examinations, including screening tests for vision and hearing,		
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		posture and musculoskeletal system; E.U14 p.1. measure basic vital parameters in a child (body temperature, heart rate, non-invasive blood pressure measurement, pulse oximetry), adapt the examination method and instrumentation to the patient's age; E.U10 p.1, E.U12. measure body temperature in children of different ages, implement basic diagnostics and symptomatic treatment of fever, taking into account other symptoms and estimating the need for hospitalization of the patient; E.U10 p.2,3,4,10,11,12,21,22, E.U12. plan initial tests and emergency treatment and determine indications for extended diagnostics or hospitalization of a child with symptoms of the respiratory system (cough, shortness of breath, nasal and ear discharge), circulatory system (palpitations, fainting, cyanosis) and nervous system (convulsions, headaches); E.U10 p.5,6,7,9,13,14,15,23, E.U12. implement initial diagnostics, plan additional tests, provide the most common causes, determine indications for hospitalization or referral to specialist care, and propose treatment in the case of general symptoms in a child (urination disorders, rash, anaemia, growth disorders, osteoarticular pain, swelling , lymphadenopathy, red eye syndrome); E.U10. plan laboratory, microbiological and imaging tests depending on the patient's clinical situation,		
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		arrange them according to the degree of urgency and informativeness of the results and justify the order; E.U10. interpret the obtained laboratory test results in the context of age norms and verify further diagnostic or therapeutic procedures; E.U10, E.U22. interpret the obtained results of microbiological tests, verify their significance in relation to the patient's condition (contamination, carrier status, colonization, infection, alarm pathogen) and revise anti-infective treatment; E.U10. plan necessary specialist consultations in accordance with the patient's medical problem; E.U10. prescribe intravenous and oral pharmacological treatment for children of different ages, taking into account the differences in pharmacotherapy in developmental age; C.U11, C.U12.issue prescriptions for medications for home treatment, taking into account legal aspects (medical and registration indications) and obtain information on the use of the drug from the summary of product characteristics; E.U14 p.11,12. perform gastric feeding and rectal enema E.U15. make a decision on the use of appropriate personal protective measures and indications for the appropriate type of isolation of the patient and is able to justify it, depending on the clinical condition, diagnosis or symptoms of the patient;		
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		E.U21. assess the correctness of the child's nutrition and the relationship between nutrition and the patient's clinical condition (especially nutrient deficiencies) and recommend a diet adapted to the clinical situation and the child's age; E.U18. write medical observations, describe the procedure performed, document the patient's condition and treatment, and complete medical documentation also with use of the IT systems; K_K02. consider indications for hospitalization, plan diagnostic tests and treatment of the child, take into account the best interests of the child; K_K03, D.U3. follow the rules of respecting privacy and medical confidentiality during child examination and contacts with the family; K_K01, D.U3. apply the principles of obtaining the consent of an underaged patient for diagnostic and treatment procedures, while taking into account the position of legal and actual guardians; K_K05, D.U04, D.U05. search for information about the patient K_K06. accept and promote the principles of a healthy lifestyle, nutrition, physical activity, hygiene, proper conditions for child development, and encourages the child and family to comply with current health care regulations and recommendations.		
	Neonatology	Lectures: The graduate knows and understands/is able to/is ready to:	Lectures: • informative lecture • conversational lecture • educational discussion	Final written test $\geq 60\%$ Extended observation > 50%

		E.W1. apply the principles of breast feeding, its benefits and drawbacks can be eliminated; E.W1. introduce alternative nutrition methods; E.W1. list nutritional modifications for specific neonatal diseases; EW2. list and interpret neonatal screening tests; EW2. set of mandatory and additional vaccinations during neonatal period; F.W9. interpret guidelines for cardiopulmonary resuscitation of newborns; K07. use objective sources of information. Seminars: The graduate knows and understands/is able to/is ready to: E.W.1 apply the principles of natural feeding, its benefits and drawbacks and determine how they can be eliminated; E.W1. introduce alternative nutrition methods; E.W1. list nutritional modifications for specific neonatal diseases; E.W2. list and interpret neonatal screening tests; E.W2. determine vaccinations mandatory and additional during neonatal period; F.W9. interpret guidelines for cardiopulmonary resuscitation of newborns; E.U8. compares anthropometric measurements of the newborn with the percentile charts; E.U8. use the scale for assessing the morphological maturity of a newborn;	Seminars: • informative lecture • conversational lecture • educational discussion • analysis of case reports Tutorials: • demonstrations with added instructions • development and improvement of practical skills • analysis of case reports • medical simulation methods	
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		E.U8. assess the condition of the newborn on the Apgar scale; E.U8. assess newborn reflexes; F.W9. recognise life-threatening conditions in a newborn; K07. use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: E.W1.introduce alternative nutrition methods; E.W1. list nutritional modifications for specific neonatal diseases; E.W2. list and interpret neonatal screening tests; E.W2. determine vaccination mandatory and additional s during neonatal period; F.W9.interpret guidelines for cardiopulmonary resuscitation of newborns; D.U3. respect patient's rights; E.U8. compare anthropometric measurements of the newborn with the percentile charts; E.U8. use the scale for assessing the morphological maturity of a newborn; E.U8. assess the condition of the newborn on the Apgar scale; E.U8. assess newborn reflexes; F.W9. recognise life-threatening conditions in a newborn; E.U13 qualify for vaccinations; E.U14. perform medical procedures including: 1) measurement and assessment of basic vital functions (temperature, heart rate, blood pressure) and monitor		
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		them using a cardiomonitor and a pulse oximeter; 2) oxygen therapy using non-invasive methods; 3) non-instrumental and instrumental unblocking of the respiratory tract; 4) collecting and securing blood for laboratory tests, including microbiological ones; 5) taking swabs for microbiological and cytological tests; 6) strip tests, including measurement of glucose concentration using a glucometer K02. consider patient's well-being as a priority; K03. observe medical confidentiality and patient rights; K02. treat patients with respect; K04. attempt to solve ethical problems; K.02. demonstrate an attitude related to the sense of saving human life; K07. use objective sources of information.		
	Neurology	Seminars: The graduate knows and understands/is able to/is ready to: E.W12. list the risks associated with hospitalization of older adults; E.W13. apply the basic principles of organizing care for an older person and the burden placed on the caregiver of an older person; E.W15. define the basic sets of neurological symptoms; E.W16. reproduce environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of	Seminars: • didactic discussion • case analysis Tutorials: • clinical exercises • course tasks • case analysis • simulation methods (case study; simulated patient) • design and analysis of scientific research • education covered by scientific activity (including scientific research methodology, research results, studies).	Seminars: Practical test >75% Final written test ≥60% Extended observation > 50% Tutorials: Practical test >75% Final written test ≥60% Extended observation > 50%

		the most common neurological diseases and their complications: 1) headaches, including migraines, tension-type headaches and headache syndromes, and V neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes, encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal ganglia, in particular Parkinson's disease; 7) demyelinating diseases, in particular multiple sclerosis; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral injuries, in particular concussion; 10) cancer; E.W21. indicate the symptoms of mental disorders in the course of somatic diseases, their impact on the course of the underlying disease and prognosis, and the principles of their treatment; E.W41. specify indications for the implementation of monitored therapy; F.W23. define the principles for suspecting and diagnosing brain death; F.W20. revise issues in the field of neurology, in particular causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases of the central nervous system in the field of: 1) cerebral oedema and its consequences, with particular emphasis on emergencies;		
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		2) other forms of intracranial compartment with their consequences; 3) cancerous tumors of the central nervous system; 4) diseases of the spine and spinal cord; E.U5. perform a complete and focused physical examination of an adult adapted to a specific clinical situation, including a neurological examination; E.U12. identify conditions requiring treatment in a hospital setting; K_K02. consider patient's well-being as a priority; K_K03. apply the principle of observing medical confidentiality and patient's rights; K_K04. demonstrate willingness to take action towards the patient based on ethical principles, with awareness of social conditions and limitations resulting from the disease; K_K05. demonstrate the habit of noticing and recognizing one's own limitations and self-assessing educational deficits and needs; K_K09. share the implementation of the principles of professional collegueship and appropriate rules of cooperation in a team, including cooperation with representatives of other medical professions, also in a multicultural environment Tutorials: The graduate knows and understands/is able to/is ready to: E.W12. list the risks associated with hospitalization of older adults; E.W13. apply the basic principles of organizing care for an older adult and the strain placed on the caregiver of an older adult;		
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		E.W15. defines the basic sets of neurological symptoms; E.W16. reproduce environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common neurological diseases and their complications: 1) headaches, including migraines, tension-type headaches and headache syndromes, and V neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal ganglia, in particular Parkinson's disease; 7) demyelinating diseases, in particular multiple sclerosis; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral injuries, in particular concussion; 10) cancer; E.W21. indicate the symptoms of mental disorders in the course of somatic diseases, their impact on the course of the underlying disease and prognosis, as well as the principles of their treatment; E.W41. specify indications for the implementation of monitored therapy; F.W23. define the rules for suspecting and diagnosing brain death;		
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		F.W20. revise issues in the field of neurology, in particular causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases of the central nervous system in the field of: 1) cerebral edema and its consequences, with particular emphasis on emergencies; 2) other forms of intracranial compartment with their consequences; 3) cancerous tumors of the central nervous system; 4) diseases of the spine and spinal cord (F.W20). E.U1. conduct an interview with an adult, including an older patient, using skills related to the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; E.U5. perform a complete and focused physical examination of an adult adapted to a specific clinical situation, including a neurological examination; E.U12. identify conditions requiring treatment in a hospital settings; E.U18. keep patient's medical records, also in electronic form, in accordance with legal regulations; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the degree of patient involvement, their needs and possibilities in this area, encourage the patient to take an active part in the decision-making process, discuss the advantages, disadvantages, expected results and consequences resulting from the decision) and obtain informed consent from the patient;		
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		E.U31. assume, explain and analyze his own role and responsibilities in the team and recognise his role as a doctor in the team; E.U32. obtain information from team members, respecting their diverse opinions and specialized competences, and incorporates this information into the patient's diagnostic and therapeutic plan; E.U33. discuss the patient's situation in the team, excluding subjective assessments, respecting the patient's dignity; K_K01. demonstrate the ability to establish and maintain deep and respectful contact with the patient, as well as show understanding for ideological and cultural differences; K_K02. consider patient's well-being as a priority; K_K03. apply the principle of observing medical confidentiality and patient rights; K_K04. demonstrate willingness to take action towards the patient based on ethical principles, with awareness of social conditions and limitations resulting from the disease; K_K05. notice and recognise one's own limitations and self-asses educational deficits and needs; K_K09. implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Psychiatry	Lectures: The graduate knows and understands/is able to/is ready to:	Lectures: • informative lecture • educational discussion Seminars: • didactic discussion	Entry test - credit $\geq 60\%$ Lectures- written exam, $\geq 60\%$ Seminars- written exam, $\geq 60\%$ Tutorials: practical exam, $\geq 60\%$

		D.W13. describe the forms of violence, including domestic violence, the social determinants of various forms of violence and the role of the doctor in recognizing it, as well as the rules of conduct in the event of suspected violence, taking into account the "Blue Card " (<i>Niebieska Karta</i>) procedure; E.W4. discuss the issues of a maltreated and sexually abused child and the principles of intervention in case of such patients; E.W5. discuss the issues of mental retardation, behavioral disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children; E.W19. discuss problems of suicidal behavior; E.W22. present problems of human sexuality and the basic disorders associated with it; E.W23. present legal regulations on mental health protection, with particular emphasis on rules for admission to a psychiatric hospital; F.W11. describe rules of conduct in the event of suspected sexual violence; E.U24. conduct an interview with the patient for the occurrence of suicidal thoughts, if justified; E.U29. identify possible indicators of violence, including domestic violence, take a medical history to verify whether there is a risk that the patient is experiencing violence, takes notes in the medical records and initiate the "Blue Card" (<i>Niebieska Karta</i>) procedure; K_K03. respect medical confidentiality and patients' rights; K_K04. take action towards the patient based on ethical principles, being aware of the social determinants	• analysis of case reports Tutorials: • development and improvement of practical skills • analysis of case reports • utilization of medical simulation methods • expository methods: film	
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		and limitations resulting from the disease. Seminars: The graduate knows and understands/is able to/is ready to: D.W8. characterize the psychosocial consequences of acute and chronic illness in children, including adolescents, and adults; D.W9. describe the psychosocial consequences of children, including adolescents, and adults hospitalization in emergency situations and chronic diseases; D.W10. describe psychosocial consequences of the disease for the patient's family (family with an ill child, also a teenager, an adult and an older adult); D.W11. describe the role of the patient's family in the disease process (diagnosis of the disease, adaptation to the disease, treatment) and ways of coping with difficult situations (progress of the disease, dying process, mourning); D.W12. problematic substance use and addiction and behavioural addictions, methods of brief intervention with problematic substance users, mechanisms of addiction and the goals and methods of treatment for addicts and effective prevention strategies, psychosomatic disorders affecting people in a close relationship with an addict and therapeutic approaches; E.W5. discuss the issues of mental retardation, behavioral disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children; E.W17. present the general symptomatology of mental disorders and the principles of their classification		
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		according to the main classification systems; E.W18. describe environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common psychiatric diseases and their complications: 1) schizophrenia; 2) affective disorders; 3) neurotic and adaptive disorders; 4) eating disorders; 5) substance use related disorders; 6) sleep disorders; 7) dementia; 8) personality disorders; E.W20. describe the specificity of mental disorders and their treatment in children, including adolescents, and older adults; E.W21. characterize the symptoms of mental disorders in the course of somatic diseases, their impact on the course of the underlying disease and prognosis, and the principles of their treatment; E.U34. use the following protocols (e.g. when handing over patient care, requesting or providing patient consultation); 1) ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury suspected), S (Symptoms/Signs), T (Treatment/Time); 2) RSVP/ISBAR (R (Reason), S (Patient Story), V (Vital signs), P (Plan)/I (Introduction), S (Situation), B (Background), A (Assessment), R (Recommendation); K_K05. identify and recognise own limitations and to self-assess educational deficits and needs; K_K06. promote healthy behaviours; K_K09. implement the principles of professional collegueship and cooperation in a team of		
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		specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: D.W8. characterize the psychosocial consequences of acute and chronic illness in children, including adolescents, and adults; D.W9. describe the psychosocial consequences of children, including adolescents, and adults hospitalization in emergency situations and chronic diseases; D.W10. describe psychosocial consequences of the disease for the patient's family (family with an ill child, including a teenager, an adult and an older adult), D.W11. describe the role of the patient's family in the disease process (diagnosis of the disease, adaptation to the disease, treatment) and ways of coping with difficult situations (progress of the disease, dying process, mourning); D.W12. problematic substance use and addiction and behavioural addictions, methods of brief intervention with problematic substance users, mechanisms of addiction and the goals and methods of treatment for addicts and effective prevention strategies, psychosomatic disorders affecting people in a close relationship with an addict and therapeutic approaches; E.W5. discuss the issues of mental retardation, behavioral disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children;	
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		E.W17. present the general symptomatology of mental disorders and the principles of their classification according to the main classification systems; E.W18. describe environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common psychiatric diseases and their complications: 1) schizophrenia; 2) affective disorders; 3) neurotic and adaptive disorders; 4) eating disorders; 5) substance use related disorders; 6) sleep disorders; 7) dementia; 8) personality disorders; E.W20. describe the specificity of mental disorders and their treatment in children, including adolescents, and older adults; E.W21. characterize the symptoms of mental disorders in the course of somatic diseases, their impact on the course of the underlying disease and prognosis, and the principles of their treatment; D.U11. adapt verbal communication to the patient's needs, express themselves in an understandable way and avoid medical jargon; D.U12. recognise and analyse difficult situations and challenges related to communication, including crying, strong emotions, anxiety, interruptions, embarrassing and sensitive issues, silence, withdrawal, aggressive and demanding behaviors, and cope with them in a constructive manner; D.U13. establish contact with a patient and a person accompanying the patient in order to build a proper relationship (e.g. 4 Habits Model: Invest in the		
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		beginning, Demonstrate empathy, Elicit the patient's perspective, Invest in the end); D.U14. look at the situation from the patient's perspective, build the appropriate context of the conversation and use the elicitation method, taking into account in the construction of the verbal communication; E.U1. interview an adult, as well as an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U7. conduct a psychiatric examination of the patient and assesses his or her mental state; E.U11. recognise the symptoms of hazardous and harmful use of alcohol and problematic use of other psychoactive substances, symptoms of psychoactive substance dependence and behavioural addictions, and propose appropriate therapeutic and medical treatment; E.U12. recognise conditions requiring treatment in a hospital settings; E.U18. fill in patient medical records, also in and electronic form, in accordance with the law; E.U20. is able to provide healthcare services by using available IT or communication systems used in healthcare; E.U21. conduct patients' health education, including nutrition education tailored to individual needs; K_K01. establish and maintain a deep and respectful relationship with the patient, and show understanding for philosophical and cultural differences;		
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		K_K02. consider patient's well-being as a priority; K_K06. promote healthy behaviors; K_K11. accept to take responsibility for decisions made in the course of professional activity, including decisions related to both own and others' safety.		
	Infectious Diseases	Seminars: The graduate knows and understands/is able to/is ready to: C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention; C.W13. consequences of exposure of the human body to chemical and physical agents and principles of its prevention; C.W14. aetiology, pathogenesis, pathophysiology, routes of transmission, forms and prevention of iatrogenic infections; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders;	Seminars: -didactic discussion -debate -teaching workshops Tutorials: -clinical tasks -case analysis -didactic discussion	Seminars: Written or oral test ($\geq 60\%$) Theoretical exam ($\geq 60\%$) Tutorials: Practical test (0-1 credit system) Extended observation (scale 0-10; $>50\%$) Practical exam ($\geq 60\%$) Theoretical exam ($\geq 60\%$)

		2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and	
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		therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; E.W31. basic issues of prevention and the management of occupational exposure to hazardous and noxious agents; E.W32. rules for dealing with suspicion and detection of an infectious disease; E.W33. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic and preventive management of the most common infectious diseases and their complications: 1) bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, pertussis, tuberculosis, Lyme disease and gastrointestinal infections; 2) viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, infections with Herpesviridae, human immunodeficiency virus and neurotropic viruses; 3) parasitic diseases, including giardiasis, amebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, roundworm, tapeworm and pinworm;	
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		4) mycoses, including candidiasis, aspergillosis and pneumocystosis; 5) nosocomial infections; E.W34. principles of management of exposure to potentially infectious material; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; G.W3. epidemiology of infectious diseases, including those related to health care, and the non- infectious ones, types and modes of prevention at different stages of the natural history of disease, and the role and principles of epidemiological surveillance; G.U2. collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: C.W10. micro-organisms with regard to pathogenic ones and those constituting the human microbiome, and invasive human forms or stages of selected parasites; (+ C.W16 of previous outcomes) C.W11. epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution; C.W12. pathogenesis and pathophysiology of infections and infestations as well as the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention;		
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		C.W13. consequences of exposure of the human body to chemical and physical agents and principles of its prevention; C.W14. the aetiology, pathogenesis, pathophysiology, routes of transmission, forms and prevention of iatrogenic infections; C.W15. methods used in microbiological and parasitological diagnosis (indications, principles of performance, interpretation of the result); E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension;		
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		7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; E.W31. basic issues of prevention and the management of occupational exposure to hazardous and noxious agents; E.W32. rules for dealing with suspicion and detection of an infectious disease; E.W33. environmental and epidemiological conditions, causes,		
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		symptoms, principles of diagnosis and therapeutic and preventive management of the most common infectious diseases and their complications: 1) bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, pertussis, tuberculosis, Lyme disease and gastrointestinal infections; 2) viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, infections with Herpesviridae, human immunodeficiency virus and neurotropic viruses; 3) parasitic diseases, including giardiasis, amebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, roundworm, tapeworm and pinworm; 4) mycoses, including candidiasis, aspergillosis and pneumocystosis; 5) nosocomial infections; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; G.W3. epidemiology of infectious diseases, including those related to health care, and the non- infectious ones, types and modes of prevention at different stages of the natural history of disease, and the role and principles of epidemiological surveillance; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and consequences of the decision) and obtain patient's conscious consent; E.U27. communicate with patients from groups at risk of economic or social exclusion, while respecting their dignity; E.U30. apply the principles of providing feedback (constructive, non-judgmental, descriptive) as part of team cooperation; E.U31. accept, explain and analyse your own role and responsibilities within the		
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		team and recognise your role as a doctor in the team; G.U2. collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K07 use objective sources of information.		
	Geriatrics	Lectures: The graduate knows and understands/is able to/is ready to: B.W21. processes of ageing and changes in organ function associated with ageing; E.W10. course and symptoms of the ageing process and the principles of holistic geriatric assessment and multidisciplinary care for older adults; E.W11. peculiarities in the clinical manifestations, diagnosis and therapy of the most common diseases affecting the older adults; E.U12. recognise conditions requiring hospital treatment; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Seminars: The graduate knows and understands/is able to/is ready to: D.W5. social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudice and discrimination;	Lectures: • informative lecture • • conversational lecture • • problem-based lecture Seminars: • case studies • didactic discussi • analysis of scientific research Tutorials: • clinical and simulation tasks	Lectures: Final written test ($\geq 60\%$) Extended observation ($> 50\%$) Seminars: Final written test ($\geq 60\%$) Extended observation ($> 50\%$) Tutorials: Oral test ($> 75\%$) Practical test (0-1 scoring system) Extended observation ($> 50\%$)

		E.W8. principles of pharmacotherapy in patients with renal failure and renal replacement therapy; E.W12. risks associated with hospitalisation of older adults; E.W13. the basic principles of organising care for an older adult and the responsibilities of a carer for an older adult; E.W28. the concept of disability; E.U12. recognise conditions requiring hospital treatment; K_K03 observe medical confidentiality and other patient rights. Tutorials: The graduate knows and understands/is able to/is ready to: E.W10. course and symptoms of the ageing process and the principles of holistic geriatric assessment and multidisciplinary care for older adults; E.W11. peculiarities in the clinical manifestations, diagnosis and therapy of the most common diseases affecting the older adults; E.U12. recognise conditions requiring hospital treatment; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists,		
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		including representatives of other medical professions, also in a multicultural and multinational environment.		
	Rehabilitation	Lectures: The graduate knows and understands/is able to/is ready to: E.W29. role of medical rehabilitation and methods of its application; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and consequences of the decision) and obtain patient's conscious consent; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease. Seminars: The graduate knows and understands/is able to/is ready to: E.W29. role of medical rehabilitation and the methods used in it; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and	Lectures: • Informative lecture • • Problem-based lecture Seminars: • Didactic discussion Tutorials: • demonstration with instruction • practical tasks • clinical tasks • observation, case study	Lectures: Final exam (≥60%) Tutorials: Extended observation (>50%) Practical test (≥60%)

		consequences of the decision) and obtain patient's conscious consent; E.U31. accept, explain and analyse your own role and responsibilities within the team and recognise your role as a doctor in the team; K_K02 consider patient's well-being as a priority. Tutorials: The graduate knows and understands/is able to/is ready to: E.W30. indications for medical rehabilitation in the most common diseases; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's involvement, needs and possibilities, encourage the patient to take an active part in the decision-making process, discuss advantages, disadvantages, expected results and consequences of the decision) and obtain patient's conscious consent.		
	Palliative Medicine/ Palliative Care (including Nutrition)	Lectures: The graduate knows and understands/is able to/is ready to: D.W17 philosophy of palliative care and its importance in the context of patient care at all stages of serious illness and death with dignity;	Lectures: • informative lecture • conversational lecture • problem-based lecture • case analysis Tutorials:	Lectures: Final written test (≥60%) Extended observation (> 50%) Seminars:

		E.W25 principles of qualification for palliative care and therapeutic procedures in the most common problems of palliative medicine, including: 1. symptomatic treatment of the most common somatic symptoms; 2. management of cancer cachexia and prevention and treatment of pressure ulcers; 3. the most common emergencies in palliative medicine; E.W26. principles of palliative care applied to a patient suffering from a serious illness, including a terminal condition; E.W27. classification of pain (acute = and chronic or nociceptive, neuropathic and nociplastic) and its causes, pain assessment tools and principles of its pharmacological and non-pharmacological treatment; F.W13. invasive methods of pain treatment; F.W22 conditions in which life expectancy, functional status or patient preferences limit treatment in accordance with disease-specific guidelines. Seminars: The graduate knows and understands/is able to/is ready to: D.W17 philosophy of palliative care and its importance in the context of patient care at all stages of serious illness and death with dignity; E.W25 principles of qualification for palliative care and therapeutic procedures in the most common problems of palliative medicine, including: 1. symptomatic treatment of the most common somatic symptoms; 2. management of cancer cachexia and prevention and treatment of pressure ulcers;	• clinical tasks • didactic discussion • case analysis • decision tree • practical aspects: correct issuance of e-prescriptions, rotation of opioids Seminars: • didactic discussion • case analysis	Final written test (≥60%) Extended observation (> 50%) Tutorials: Practical test (scoring system 0-1) Extended observation (> 50%)
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		3. the most common emergencies in palliative medicine; E.W26. principles of palliative care applied to a patient suffering from a serious illness, including a terminal condition; E.W27. classification of pain (acute = and chronic or nociceptive, neuropathic and nociplastic) and its causes, pain assessment tools and principles of its pharmacological and non-pharmacological treatment; F.W13. invasive methods of pain treatment; F.W22.conditions in which life expectancy, functional status or patient preferences limit treatment in accordance with disease-specific guidelines. Tutorials: The graduate knows and understands/is able to/is ready to: E.U16 declare the patient dead; E.U17 participate in the process of patient dying with dignity, using the potential of palliative care; E.U18 maintain the patient's medical records, including in electronic form, in accordance with the law; E.U20 provide health services using available IT systems or communication systems used in health care; E.U22 apply rational antibiotic therapy depending on the patient's clinical condition; E.U23 conduct a conversation with the patient, taking into account the conversation pattern (starting the conversation, collecting information, explaining and planning, ending the conversation), including giving structure to such a conversation and shaping the relationship with the patient using the selected model (e.g. Calgary-Cambridge, Segue, Kalamazoo Consensus, Maastricht		
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		Maas Global), including by electronic means of communication; E.U25. provide information to the patient, adapting its quantity and content to the patient's needs and capabilities, and supplement verbal information with models and written information, including charts and instructions, and apply them appropriately; E.U26. make diagnostic and therapeutic decisions together with the patient (assess the patient's level of involvement, needs and possibilities in this regard, encourage the patient to take an active part in the decision-making process, discuss the advantages, disadvantages, expected results and consequences resulting from the decision) and obtain informed consent from the patient; F.U21. transmit unfavorable messages using the selected protocol, med.: 1) SPIKES: S (Setting), P (Perception), I (Invitation/Information), K (Knowledge), E (Emotions and empathy), S (Strategy and summary), 2) EMPATHY: E (Emotions), M (Place), P (Patient's perspective), A (Appropriate language), T (Message content), I (Additional information), A (Annotation in the documentation), Journal of Laws – 35 – 34 – item 2152 3) ABCDE: A (Advance preparation – preparing for a conversation), B (Build therapeutic environment – establishing good contact with the family), C (Communicate well – conveying bad news, taking into account the rules of communication); D (Dealing with reactions - dealing with difficult emotions), E (Encourage and validate emotions - the right to show emotions, redirect them and respond adequately, aiming to end the meeting) - including supporting the family in the process of the patient dying with dignity and informing the family about patient's death		
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		K_K01 establishing and maintaining deep and respectful contact with the patient, as well as showing understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 respecting medical confidentiality and patient rights K_K04 taking action towards the patient based on ethical principles, with awareness of the social conditions and limitations resulting from the disease; K_K05 noticing and recognizing one's own limitations and self-assessing educational deficits and needs; K_K07 using objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accepting responsibility related to decisions made as part of professional activity, including in terms of one's own safety and that of other people;		
	Clinical Oncology	Lectures: The graduate knows and understands/is able to/is ready to: C.W21. issues in the field of cancer immunology and immune-related diseases and principles of immunotherapy; C.W41. basics of radiotherapy; E.U19. plan diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation; E.W9. principles of nutritional treatment and fluid therapy in various disease states; E.W14. types of vascular access and their use, in particular in oncology; E.W24. issues in the field of oncology, including: 1) genetic, environmental and epidemiological conditions, causes,	Lectures: informative lecture, conversation lecture, case analysis Seminars: didactic discussion, exposing methods: show, film Tutorials: clinical exercises, case analysis,	Lectures: Final written examination (≥60%) Prolonged observation (>50%) Seminars: Final written examination (≥60%) Oral test (>75%) Prolonged observation (>50%) Tutorials: Final written examination (≥60%)

		symptoms, principles of diagnosis and therapeutic procedures in the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical symptoms; 3) basics of early detection of cancer, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies as well as targeted and personalized treatment; 5) early and long-term complications of oncological treatment; 6) the role of supportive treatment, including nutritional treatment; 7) principles of organizing care for oncological patients, including genetic counseling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles of interpretation of clinical trial results; 9) the most important scales and classifications used in oncology; 10) principles of conducting targeted physical examinations of adults regarding the breast and prostate gland; 11) principles of planning diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation; E.W41. indications for implementing monitored therapy; F.W5. the most common complications of modern oncological treatment; G.W21. epidemiology of cancer diseases, in particular their nutritional, environmental and other lifestyle conditions affecting oncological risk; G.W22. the importance of screening tests in oncology, including the risks associated with diagnostic tests of healthy people, and health benefits in relation to the most common cancer diseases in the Republic of Poland;		Oral test (>75%) Prolonged observation (>50%)
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		K_K01 establishing and maintaining deep and respectful contact with the patient, as well as showing understanding for ideological and cultural difference. Seminars: The graduate knows and understands/is able to/is ready to: C.W21. issues in the field of cancer immunology and immune-related diseases and principles of immunotherapy; C.W41. basics of radiotherapy; E.U19. plan diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation; E.U28. identify social determinants of health, indicators of anti-health and self-destructive behaviors and discuss them with the patient and prepare a note in the medical record; E.W9. principles of nutritional treatment and fluid therapy in various disease states; E.W14. types of vascular access and their use, in particular in oncology; E.W24. issues in the field of oncology, including: 1) genetic, environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical symptoms; 3) basics of early detection of cancer, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies as well as targeted and personalized treatment; 5) early and long-term complications of oncological treatment;	
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		6) the role of supportive treatment, including nutritional treatment; 7) principles of organizing care for oncological patients, including genetic counseling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles of interpretation of clinical trial results; 9) the most important scales and classifications used in oncology; 10) principles of conducting targeted physical examinations of adults regarding the breast and prostate gland; 11) principles of planning diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation; E.W41. indications for implementing monitored therapy; F.W5. most common complications of modern oncological treatment; G.W21. epidemiology of cancer diseases, in particular their nutritional, environmental and other lifestyle conditions affecting oncological risk; G.W22. importance of screening tests in oncology, including the risks associated with diagnostic tests of healthy people, and health benefits in relation to the most common cancer diseases in the Republic of Poland; K_K01 establish and maintain deep and respectful contact with the patient, as well as show understanding for ideological and cultural difference. Tutorials: The graduate knows and understands/is able to/is ready to: E.U4. perform a focused physical examination of the adult regarding the breast and prostate; E.U16. declare the patient dead; E.U19. plan diagnostic, therapeutic and preventive procedures in the field of		
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		cancer treatment based on test results and provided medical documentation; E.U25. provide the patient with information, adapting its quantity and content to the patient's needs and capabilities, and supplement verbal information with models and written information, including charts and instructions, and apply it appropriately; E.U28. identify social determinants of health, indicators of anti-health and self-destructive behaviors and discuss them with the patient and prepare a note in the medical record; F.U21. transmit unfavorable messages using the selected protocol, med.: 1) SPIKES: S (Setting), P (Perception), I (Invitation/Information), K (Knowledge), E (Emotions and empathy), S (Strategy and summary), 2) EMPATHY: E (Emotions), M (Place), P (Patient's perspective), A (Appropriate language), T (Message content), I (Additional information), A (Annotation in the documentation), Journal of Laws – 35 – 34 – item 2152; 3) ABCDE: A (Advance preparation), B (Build therapeutic environment), C (Communicate well); D (Dealing with reactions - dealing with difficult emotions), E (Encourage and validate emotions - the right to show emotions, redirect them and respond adequately, aiming to end the meeting) - including supporting the family in the process of the patient dying with dignity and informing the family about patient's death; K_K01 establish and maintain deep and respectful contact with the patient, as well as showing understanding for ideological and cultural difference.		
	Family Medicine	Seminars: The graduate knows and understands/is able to/is ready to:	Seminars: information seminar conversation seminar Tutorials:	Seminars: Final written examination (≥60%) Extended observation (>50%)

		D.W3 human behaviors conducive to maintaining health and principles of motivating the patient to pro-health behaviors (Prochaska and DiClemente's model of change, motivational interviewing); E.U13 qualify the patient for vaccinations; laboratory, including microbiological; E.U21 provide health education to the patient, including nutritional education tailored to individual needs; E.W1 principles of natural feeding, feeding a healthy child and preventing obesity, as well as nutritional modifications resulting from diseases; E.W2 principles of prevention of diseases occurring in children, including screening tests, health checks and vaccinations; E.W3 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases occurring in children and their complications: 1. rickets, tetany, water-electrolyte and acid-base disorders; 2. heart defects, inflammation of the myocardium, endocardium and pericardium, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3. respiratory diseases and allergies, including congenital defects of the respiratory system, bronchiectasis, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4. anemia, bleeding disorders, bone marrow failure, childhood cancers, including solid tumors typical of childhood, primary and secondary immunodeficiencies;	case analysis simulation methods clinical exercises - work in small groups (discussion, debate, role play) E-learning	Tutorials: Final written examination ($\geq 60\%$) Practical test (0-1 scoring system) Extended observation ($> 50\%$) E-learning: Final written examination ($\geq 60\%$) Extended observation ($> 50\%$)
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		5. acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel diseases, pancreatic diseases, cholestasis, liver diseases, food allergies, congenital defects of the gastrointestinal tract; 6. acute kidney injury, chronic kidney disease, urinary tract infections, urination disorders, congenital defects of the urinary tract, vesicoureteral reflux disease, nephrolithiasis, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetic kidney diseases conditioned, renal hypertension; 7. growth disorders, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, obesity, puberty disorders, gonadal disorders; 8. cerebral palsy, encephalitis and meningitis, convulsions, epilepsy; 9. most common childhood infectious diseases; 10. systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common internal diseases occurring in adults and their complications: 1. diseases of the circulatory system, including ischemic heart disease, heart defects, diseases of the endocardium, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous diseases, arterial hypertension (primary and secondary), pulmonary hypertension;	
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		2. respiratory diseases, including respiratory diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, diseases of the interstitial lungs, pleura, mediastinum, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory cancers; 3. diseases of the digestive system, including diseases of the oral cavity, esophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, and cancers of the digestive system; 4. diseases of the endocrine system, including diseases of the hypothalamus and pituitary, thyroid, parathyroid glands, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumors, multiglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidemia and hypoglycemia, ovarian cancer, testicles and thyroid, neuroendocrine tumors; 5. diseases of the kidneys and urinary tract, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial diseases of the kidneys, renal hypertension, renal cysts , kidney stones, urinary tract infections (upper and lower sections), kidney diseases during pregnancy, urinary tract cancers - kidney, bladder, prostate cancer; 6. diseases of the hematopoietic system, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukemias, myelomas, myelo- and lymphoproliferative tumors, myelodysplastic syndromes, bleeding	
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		disorders, thrombophilia, blood disorders in diseases of other organs; 7. rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, systemic sclerosis, idiopathic inflammatory myopathies), spondyloarthropathy, crystallopathies, erythema nodosum, arthritis associated with infectious agents , vasculitis and non-inflammatory diseases of joints and bones (degenerative disease, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue and bone sarcomas; 8. allergic diseases, including anaphylaxis, anaphylactic shock and angioedema; 9. water-electrolyte and acid-base disorders (states of dehydration, states of overhydration, electrolyte disorders, acidosis and alkalosis); E.W33 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic and preventive procedures of the most common infectious diseases and their complications: 1. bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, whooping cough, tuberculosis, Lyme disease and gastrointestinal infections; 2. viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, infections with Herpesviridae viruses, human immunodeficiency virus and neurotropic viruses; 3. parasitic diseases, including giardiasis, amoebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, ascariasis, tapeworm and threadworm; 4. mycoses, including candidiasis, aspergillosis and pneumocystosis; 5. nosocomial infections;		
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		E.W37 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the most common diseases in the practice of a family doctor; E.W38 principles of health-promoting behavior, basics of prevention and early detection of the most common lifestyle diseases and principles of screening for these diseases; K_K05 noticing and recognizing one's own limitations and self-assessing educational deficits and needs; K_K07 using objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to D.U1 follow ethical standards in professional activities, including planning and carrying out the therapeutic process in accordance with ethical values and the idea of humanism in medicine; D.U3 respect the patient's rights; D.U4 demonstrate responsibility for improving one's qualifications and transferring knowledge to others; D.U5 critically analyze medical literature, including in English, and draw conclusions; D.U6 communicate with the patient in one of the foreign languages at level B2+ of the Common European Framework of Reference for Languages; D.U10 use open and closed questions, paraphrase, clarification, internal and final summaries, signaling, active listening (e.g. capturing and recognizing signals sent by the interlocutor, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate to the situation;		
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		D.U11 adapt the method of verbal communication to the patient's needs, expressing himself in an understandable way and avoiding medical jargon; D.U12 recognise and analyze difficult situations and challenges related to communication, including crying, strong emotions, anxiety, interruptions in speech, embarrassing and sensitive issues, silence, withdrawal, aggressive and demanding behavior, and deal with them in a constructive way; D.U13 establish contact with the patient and the person accompanying the patient in order to build an appropriate relationship (e.g. 4 Habits Model: Invest in the beginning), Demonstrate empathy, Recognise the patient's perspective perspective), Invest in the end); E.U1 collect an interview with an adult, including an older person, using skills regarding the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; E.U2 collect an interview with the child and his/her caregivers, using skills regarding the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; E.U5 perform a complete and focused physical examination of an adult appropriate to the specific clinical situation, including examination of: 1. general internal medicine; 2. neurological; 3. gynecological; 4. musculoskeletal system; 5. ophthalmological; 6. otolaryngological; 7. geriatric; E.U6 perform a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to		
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		the specific clinical situation, including examination of: 1. general pediatrics; 2. neurological; 3. musculoskeletal system; 4. ophthalmological; 5. otolaryngological; E.U8 perform balance tests, including comparing anthropometric and blood pressure measurements with data on percentile charts and assessing the degree of puberty; E.U9 recognise the most common symptoms of the disease in adults, use diagnostic tests and interpret their results, perform differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular in the case of symptoms such as: 1. fever; 2. weakness; 3. loss of appetite; 4. weight loss; 5. shock; 6. cardiac arrest; 7. disturbance of consciousness, including fainting; 8. swelling; 9. rash; 10. coughing and expectoration; 11. hemoptysis; 12. shortness of breath; 13. discharge from the nose and ear; 14. chest pain; 15. palpitations; 16. cyanosis; 17. nausea and vomiting; 18. swallowing disorders; 19. abdominal pain; 20. presence of blood in the stool; 21. constipation and diarrhea; 22. jaundice;		
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		23. bloating and resistance in the abdominal cavity; 24. anemia; 25) lymphadenopathy; 25. urination disorders; 26. hematuria and proteinuria; 27. menstrual disorders; 28. depressed mood and anxiety; 29. memory and cognitive disorders; 30. headache; 31. dizziness; 32. paresis; 33. convulsions; 34. back pain; 35. joint pain; 36. injury or burn; 37. dehydration and overhydration; E.U10 recognise the most common symptoms of the disease in children, use diagnostic tests and interpret their results, conduct differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular in the case of symptoms such as: 1. fever; 2. coughing and expectoration; 3. shortness of breath; 4. discharge from the nose and ear; 5. urination disorders; 6. rash; 7. anemia; 8. eating disorders; 9. growth disorders; 10. convulsions and disturbances of consciousness; 11. palpitations; 12. fainting; 13. osteoarticular pain; 14. swelling; 15. lymphadenopathy; 16. abdominal pain; 17. constipation and diarrhea; 18. presence of blood in the stool; 19. dehydration; 20. jaundice;		
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		21. cyanosis; 22. headache; 23. red eye syndrome; E.U13 qualify the patient for vaccinations; E.U14 perform medical procedures and treatments, including: 1. measurement and assessment of basic vital functions (temperature, heart rate, blood pressure) and monitoring them using a cardiomonitor and a pulse oximeter; 2. various forms of inhalation therapy, and select the inhaler according to the patient's clinical condition; 3. measurement of peak expiratory flow; 4. oxygen therapy using non-invasive methods; 5. non-instrumental and instrumental unblocking of the respiratory tract; 6. intravenous, intramuscular and subcutaneous drug administration; 7. collecting and securing blood for laboratory tests, including microbiological ones; 8. collection of arterial blood and arterialized capillary blood; 9. taking swabs for microbiological and cytological tests; 10. urinary bladder catheterization in women and men; 11. insertion of a gastric tube; 12. rectal enema; 13. standard resting electrocardiogram, and interpret its result; 14. defibrillation, electrical cardioversion and external electrostimulation; 15. strip tests, including measurement of glucose concentration using a glucometer; 16. pleural procedures: puncture and decompression of pneumothorax; 17. anterior nasal tamponade; 18. ultrasound examination in life-threatening situations according to the FAST (Focused Assessment with Sonography in Trauma) protocol or its equivalent, and interpret its result;		
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		E.U16 declare the patient dead; E.U18 maintain the patient's medical records, including in electronic form, in accordance with the law; E.U20 provide health services using available IT systems or communication systems used in health care; E.U21 provide health education to the patient, including nutritional education tailored to individual needs; E.U22 apply rational antibiotic therapy depending on the patient's clinical condition; E.U25 provide information to the patient, adapting its quantity and content to the patient's needs and capabilities, and supplement verbal information with models and written information, including charts and instructions, and apply them appropriately; E.U27 communicate with patients from groups at risk of economic or social exclusion, respecting their dignity; E.U28 identify social determinants of health, indicators of anti-health and self-destructive behaviors and discuss them with the patient and make a note in the medical documentation; E.U29 identify possible indicators of violence, including domestic violence, collect an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" procedure; immunodeficiency and viruses G.U6 issue medical certificates and medical certificates, prepare opinions for the patient, authorized bodies and entities, prepare and maintain medical records (in electronic and paper form) and use information and communication tools and services in health care (e-health); K_K01 establishing and maintaining deep and respectful contact with the patient, as		
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		well as showing understanding for ideological and cultural differences; K_K02 being guided by the good of the patient K_K03 respecting medical confidentiality and patient rights E-learning: The graduate knows and understands/is able to/is ready to: D.W3 human behaviors conducive to maintaining health and principles of motivating the patient to pro-health behaviors (Prochaska and DiClemente's model of change, motivational interviewing); E.W1 principles of natural feeding, feeding a healthy child and preventing obesity, as well as nutritional modifications resulting from diseases; E.W2 principles of prevention of diseases occurring in children, including screening tests, health checks and vaccinations; E.W3 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases occurring in children and their complications: 1. rickets, tetany, water-electrolyte and acid-base disorders; 2. heart defects, inflammation of the myocardium, endocardium and pericardium, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3. respiratory diseases and allergies, including congenital defects of the respiratory system, bronchiectasis, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema;		
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		4. anemia, bleeding disorders, bone marrow failure, childhood cancers, including solid tumors typical of childhood, primary and secondary immunodeficiencies; 5. acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel diseases, pancreatic diseases, cholestasis, liver diseases, food allergies, congenital defects of the gastrointestinal tract; 6. acute kidney injury, chronic kidney disease, urinary tract infections, urination disorders, congenital defects of the urinary tract, vesicoureteral reflux disease, nephrolithiasis, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetic kidney diseases conditioned, renal hypertension; 7. growth disorders, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, obesity, puberty disorders, gonadal disorders; 8. cerebral palsy, encephalitis and meningitis, convulsions, epilepsy; 9. most common childhood infectious diseases; 10. systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common internal diseases occurring in adults and their complications: 1. diseases of the circulatory system, including ischemic heart disease, heart defects, diseases of the endocardium, heart		
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		muscle, pericardium, heart failure (acute and chronic), arterial and venous diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2. respiratory diseases, including respiratory diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, diseases of the interstitial lungs, pleura, mediastinum, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory cancers; 3. diseases of the digestive system, including diseases of the oral cavity, esophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, and cancers of the digestive system; 4. diseases of the endocrine system, including diseases of the hypothalamus and pituitary, thyroid, parathyroid glands, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumors, multiglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidemia and hypoglycemia, ovarian cancer, testicles and thyroid, neuroendocrine tumors; 5. diseases of the kidneys and urinary tract, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial diseases of the kidneys, renal hypertension, renal cysts , kidney stones, urinary tract infections (upper and lower sections), kidney diseases during pregnancy, urinary tract cancers - kidney, bladder, prostate cancer; 6. diseases of the hematopoietic system, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic		
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		leukemias, myelomas, myelo- and lymphoproliferative tumors, myelodysplastic syndromes, bleeding disorders, thrombophilia, blood disorders in diseases of other organs; 7. rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, systemic sclerosis, idiopathic inflammatory myopathies), spondyloarthropathy, crystallopathies, erythema nodosum, arthritis associated with infectious agents, vasculitis and non-inflammatory diseases of joints and bones (degenerative disease, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue and bone sarcomas; 8. allergic diseases, including anaphylaxis, anaphylactic shock and angioedema; 9. water-electrolyte and acid-base disorders (states of dehydration, states of overhydration, electrolyte disorders, acidosis and alkalosis); E.W33 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic and preventive procedures of the most common infectious diseases and their complications: 1. bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, whooping cough, tuberculosis, Lyme disease and gastrointestinal infections; 2. viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, infections with Herpesviridae viruses, human immunodeficiency virus and neurotropic viruses; 3. parasitic diseases, including giardiasis, amoebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, ascariasis, tapeworm and threadworm;		
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		4. mycoses, including candidiasis, aspergillosis and pneumocystosis; 5. nosocomial infections; E.W37 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the most common diseases in the practice of a family doctor; E.W38 principles of health-promoting behavior, basics of prevention and early detection of the most common lifestyle diseases and principles of screening for these diseases;		
GROUP F	Diagnostic Imaging	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology. B.W7. physical basis of non-invasive imaging methods; B.U2. assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections,	Lectures: informative lecture problem lecture case studies Tutorials: didactic discussion practical tasks case studies decision tree independent operation of the apparatus exposing methods: demonstration	Lectures: Credit: oral/written (≥60%) Exam (≥60%) Extended observation (>50%) Tutorials: Credit: oral/written (≥60%) Exam (≥60%) Extended observation (>50%)

		tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular		
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		diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic,	
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		idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers;		
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		F.W17. problems of contemporary imaging, in particular: 1) the radiological symptomatology of the underlying diseases; 2) instrumental methods and imaging techniques used to perform medical procedures; 3) indications, contraindications and preparation of the patient for the various types of imaging examinations and contraindications to the use of contrast agents; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology; B.W7. the physical basis of non-invasive imaging methods; B.U2. assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;		
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		3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle,		
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		pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus		
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		erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist		
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		consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W17. problems of contemporary imaging, in particular:		
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		1) the radiological symptomatology of the underlying diseases; 2) instrumental methods and imaging techniques used to perform medical procedures; 3) indications, contraindications and preparation of the patient for the various types of imaging examinations and contraindications to the use of contrast agents; F.U5. recognise the most common types of fractures, especially long bones, based on radiological examination; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information.		
	Vascular Surgery	Lectures - E-learning: The graduate knows and understands/is able to/is ready to: E.U29 identify possible indicators of violence, including domestic violence, collect an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" (<i>Niebieska Karta</i>) procedure; F.W3 basic classic and minimally invasive treatment techniques; F.W4 rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures and the most common complications; K_K11 accepting responsibility related to decisions made as part of professional activity, including in terms of one's own safety and that of other people. Seminars:	Lecture E-learning • Presentation of selected topics • Pedagogical discussion Seminars: • Workshop-style seminar • Convent • Pedagogical discussion • Case analysis Tutorials: • Pedagogical discussion • Demonstration with instruction • Clinical exercises • Simulation methods (case study, simulated patient)	Lectures - E-Learning: Oral exam (> 75%) Extended observation (> 50%) Seminars: Oral exam (> 75%) Extended observation (> 50%) Tutorials: Practical exam (scoring system 0-1) Extended observation (> 50%)

		The graduate knows and understands/is able to/is ready to: E.U29 identify possible indicators of violence, including domestic violence, collect an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" (<i>Niebieska Karta</i>) procedure; F.W3. basic classic and minimally invasive treatment techniques; F.W4 rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures and the most common complications F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; K_K11 accept responsibility related to decisions made as part of professional activity, including in terms of one's own safety and that of other people. Tutorials: The graduate knows and understands/is able to/is ready to: F.W3 basic classic and minimally invasive treatment techniques; F.W4 rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures and the most common complications; F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; E.U5 perform a complete and focused physical examination of an adult appropriate to the specific clinical situation, including examination of: 1. general internal medicine; 2. neurological; 3. gynecological; 4. musculoskeletal system; 5. ophthalmological; 6. otolaryngological; 7. geriatric;		
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		E.U6. perform a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to the specific clinical situation, including examination of: 1. general pediatrics; 2. neurological; 3. musculoskeletal system; 4. ophthalmological; 5. otolaryngological; E.U29. identify possible indicators of violence, including domestic violence, collect an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" (<i>Niebieska Karta</i>) procedure; K_K11 accept responsibility related to decisions made as part of professional activity, including in terms of one's own safety and that of other people .		
	Thoracic Surgery	Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W17. problems of contemporary imaging, in particular: 1) the radiological symptomatology of the underlying diseases; 2) instrumental methods and imaging techniques used to perform medical procedures; 3) indications, contraindications and preparation of the patient for the various types of imaging examinations and contraindications to the use of contrast agents.	Seminars: - informative lectures - thematic conversational lectures - didactic discussion - case study Tutorials: - didactic discussion - bedside tutorials - case study - demonstration, - film; - simulated patient	Seminars: Final oral test (>60%) Tutorials: Final oral test (>60%) Extended observation (<50%)

		Tutorials: The graduate knows and understands/is able to/is ready to: A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis;		
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		34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences;		
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		K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	General and Endocrine Surgery	Lectures: The graduate knows and understands/is able to/is ready to: C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes,	Lectures: - informative lectures using remote education techniques and tools - thematic conversational lectures using remote education techniques and tools - didactic discussion using remote education techniques and tools - case study with the use of remote education techniques and tools Seminars: - informative lecture - conversation lecture - didactic discussion - case analysis The graduate knows and understands/is able to/is ready to: - bedside tasks - drills in the operating room as an assistant - operating theatre tasks as a 'dirty nurse'. - familiarisation with the work in the operating theatre	Lectures: Written test combined with a preliminary colloquium (>75%) Extended observation (> 50%) Seminars: Oral final test (>75%) Extended observation (> 50%) Tutorials: Practical test (0-1 system) Conducted in stationary environment Extended observation (> 50%) Practical Exam (0-1 system) – Conducted in stationary environment Oral exam (>75%)

		various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis). E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology;	
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		6) otolaryngology 7) geriatric; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; K_K03 observe medical confidentiality and other patient rights. Seminars: The graduate knows and understands/is able to/is ready to: C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and		
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		gallbladder, tumours of the digestive system; 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis).		
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		E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; K_K03 observe medical confidentiality and other patient rights. Tutorials: The graduate knows and understands/is able to/is ready to: E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest;		
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		7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration;		
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		7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure; F.U2. apply and change a sterile dressing; F.U3. assess and treat a simple wound, including local anaesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing; F.U4. recognise the most common life-threatening conditions, including using various imaging techniques; F.U8. treat external bleeding; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences.		
	Surgical Oncology	Seminars: The graduate knows and understands/is able to/is ready to: A.W1. the structure of the human body in a topographical and functional approach, including topographical relationships	Seminars: · informative seminar · conversational seminar · educational discussion · analysis of case reports Tutorials: · demonstrations with added instructions	Seminars: Final test (≥60%) Tutorials: Final test (≥60%) Practical test (0-1 scoring system) Extended observation (> 50%)

		between different organs, including anatomical, histological and embryological terminology; E.W9. principles of nutritional and fluid therapy in various disease states; E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment; 6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers;	· development and improvement of practical skills · analysis of case reports · utilization of medical simulation methods	
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		F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W5. the most common complications of modern oncology treatment; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; Tutorials: The graduate knows and understands/is able to/is ready to: D.U3. respect patients' rights; E.U19. plan diagnostic, therapeutic and preventive management of cancer treatment on the basis of test results and medical documentation provided; E.U25. communicate information to the patient, adapting the amount and content to the patient's needs and capabilities of the patient, and supplement verbal information with models and written information, including charts and instructions, and use them accordingly; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure; F.U2. apply and change a sterile dressing; F.U21. pass unfavorable messages using the selected protocol, e.g.: 1) SPIKES: S (Setting), P (Perception), I (Invitation/Information), K (Knowledge), E (Emotions and empathy), S (Strategy and summary), 2) EMPATHY: E (Emotions), M (Place), P (Patient's perspective), A (Appropriate language), T (Message content), I (Additional information), A (Annotation in the documentation), Journal of Laws — 35 – 34 – item 2152 3) ABCDE: A (Advance preparation - preparing for a conversation), B (Building therapeutic environment - establishing good contact with the family), C (Communicating well -		
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		conveying bad news, taking into account the rules of communication), D (Dealing with reactions – dealing with difficult emotions), E (Encouraging and validate emotions – right to show emotions, redirect them and respond appropriately, aiming to end the meeting) – including supporting the family in the process of dying with dignity and informing the family about the patient's death; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K06 promote health behaviours.		
	Transplantology	Seminars: The graduate knows and understands/is able to/is ready to: D.U10. use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate; E.W8 principles of pharmacotherapy in patients with renal failure and renal replacement therapy; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with analgesic therapy and monitoring Postoperative care;	Seminars: • conversational lecture • educational discussion • analysis of case reports • presentation of the individual work-out Tutorials: • demonstration with instruction • clinical tasks • simulation methods	Seminars: oral knowledge test (>75%) Tutorials: oral knowledge test and presentation of practical skills >75% Final test >60% Extended observation (<50%)

		F.W21 principles of promoting tissue and cell donation, indications for transplantation of organs supplied with blood, hematopoietic tissues and cells, treatment complications and principles of long-term care after transplantation; F.U4 recognise the most common life-threatening conditions, including those involving use various imaging techniques; G.W9. legislation on transplantation, artificial procreation, abortion, aesthetic treatments, palliative care, persistent therapy, mental illness, infectious diseases; K_K02 consider patient's well-being as a priority. Tutorials: The graduate knows and understands/is able to/is ready to: F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with analgesic therapy and postoperative monitoring; F.U4 recognise the most common life-threatening conditions, including those involving use various imaging techniques; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; K_K02 consider patient's well-being as a priority; K_K04 take action towards the patient based on ethical principles, while being		
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		aware of the social determinants and limitations resulting from the disease.		
	Orthopaedics with Traumatology	Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W2. causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U2. interview the child and their carers, using skills on the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U6. perform a complete and focused physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation, including: 1) general paediatric;	Seminars: • Informative seminar • Problem seminar Tutorials: • clinical tasks • didactic discussion • case analysis	Seminars: Exam (≥60%) Final test (≥60%) Tutorials: Entrance test (≥60%) Practical test (≥60%) Final test (≥60%)

		2) neurological; 3) musculoskeletal system; 4) ophthalmology; 5) otolaryngology; F.U5. recognise the most common types of fractures, especially long bones, based on radiological examination; K_K02 consider patient's well-being as a priority; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation. Tutorials: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W2. causes, symptoms, principles of diagnosis and therapeutic management for the most common congenital malformations and diseases requiring surgical treatment in children; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U2. interview the child and their carers, using skills on the content, process and perception of communication, taking into account the biomedical and patient perspectives;		
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		E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U6. perform a complete and focused physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation, including: 1) general paediatric; 2) neurological; 3) musculoskeletal system; 4) ophthalmology; 5) otolaryngology; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure; F.U3. assess and treat a simple wound, including local anaesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing; F.U5. recognise the most common types of fractures, especially long bones, based on radiological examination; F.U6. temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing; F.U8. treat external bleeding; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease;	
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		K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation.		
	Nuclear Medicine	Seminars: The graduate knows and understands/is able to/is ready to: A.W1.structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; B.W7. physical basis of non-invasive imaging methods; E.W3. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1) rickets, tetany, water-electrolyte and acid-base disorders; 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3) respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4) anaemias, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies, including solid tumours typical for childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal haemorrhage, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract;	Seminars: • PowerPoint presentation • didactic dispute • Case study Tutorials: • informatic demonstration • practical tasks • simulated patient	Seminars: Final test ($\geq 60\%$) Extended observation ($>50\%$) Tutorials: Final test ($\geq 60\%$) Extended observation ($>50\%$)

		6) acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital abnormalities of the urinary tract, vesicoureteral reflux disease, kidney stones, diseases of the glomerulonephritis, tubulointerstitial diseases (tubulopathies, tubular acidoses), genetically determined kidney diseases, renal hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal diseases, diabetes, obesity, puberty disorders, gonadal dysfunction; 8) cerebral palsy, encephalitis and meningitis, seizures, epilepsy; 9) the most common childhood infectious diseases; 10) systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathies); E.W7. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common adult internal medicine diseases and their complications: 1) cardiovascular diseases, including ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular diseases, arterial hypertension (primary and secondary), pulmonary hypertension; 2) respiratory diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleurisy, mediastinum, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory cancers; 3) diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, tumours of the digestive system;	
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		4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, and neuroendocrine tumours, polyglandular syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidaemia and hypoglycaemia, ovarian, testicular and thyroid tumours, neuroendocrine tumours; 5) kidney and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, glomerular diseases (primary and secondary, including diabetic nephropathy and systemic diseases) and interstitial kidney diseases, renal hypertension, renal cysts, kidney stones, urinary tract infections (upper and lower), kidney diseases during pregnancy, urinary tract tumours - kidney cancer, bladder cancer, prostate cancer; 6) haematopoietic diseases, including bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute and chronic leukaemias, myelomas, myeloproliferative neoplasms, myelodysplastic syndromes, haemorrhagic diathesis, thrombophilia, blood disorders in diseases of other organs; 7) rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, sarcoidosis, scleroderma, systemic, idiopathic inflammatory myopathies), spondyloarthropathies, crystallopathies, erythema nodosum, inflammatory arthritis associated with infectious agents, vasculitis and non-inflammatory joint and bone diseases (osteoarthritis, soft tissue rheumatism, osteoporosis, fibromyalgia), soft tissue sarcomas and bone sarcomas.; 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema; 9) water-electrolyte and acid-base disorders (dehydration states, conductive states, electrolyte disturbances, acidosis and alkalosis); E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and		
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		therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W17. problems of contemporary imaging, in particular: 1) the radiological symptomatology of the underlying diseases; 2) instrumental methods and imaging techniques used to perform medical procedures; 3) indications, contraindications and preparation of the patient for the various types of imaging examinations and contraindications to the use of contrast agents; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs;		
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		K_K07 use objective sources of information. Tutorials: The graduate knows and understands/is able to/is ready to: A.U4. infer relationships between anatomical structures on the basis of of intravenous diagnostic examinations, particularly in the field of radiology. B.U2. assess the effects of ionising radiation doses on normal and altered diseased tissues of the body and comply with the principles of radiological protection; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances;		
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		27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis; 34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Introduction to Surgery	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. the structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; F.W1. causes, symptoms, principles of diagnosis and therapeutic management	Lectures: • Informative lecture utilizing remote teaching techniques • Thematic conversational lectures utilizing remote teaching techniques • didactic dispute utilizing remote teaching techniques • case study utilizing remote teaching techniques Seminars: . thematic conversational lectures . didactic dispute . PowerPoint presentation Tutorials: • bedside tutorials	Lectures: Oral examination (0 – 16 points; > 75%); Final examination (>60%) Seminars: Oral examination (0 – 16 points; > 75%); Final examination (>60%) Tutorials: Oral examination (0 – 16 points; > 75%) Practical examination (0-1 system) Final examination (>60%) Extended observation

		for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; Seminars: The graduate knows and understands/is able to/is ready to: A.W1.structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; Tutorials: The graduate knows and understands/is able to/is ready to: A.U3. explain the anatomical basis of the physical examination; D.U3. respect patients' rights; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U3. take a medical history in a life-threatening situation using the following scheme:	• assisting surgical procedures • tutorials as a scrub nurse in the operative suite • tutorials in handling patient's records:	(0 – 10 points; > 50%)
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		SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness); E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical	
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		field in accordance with aseptic rules, and participate in the surgical procedure; F.U3. assess and treat a simple wound, including local anesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing; F.U4. recognise the most common life-threatening conditions, including using various imaging techniques; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease.		
	Cardiac Surgery	Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; D.U10. use open and closed questions, paraphrasing, clarification, internal and final summaries, signalling, active listening (e.g. capturing and recognising the interlocutor's signals, verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak) as appropriate; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation.	Seminars: • didactic discussion • case analysis Exercises: • demonstration with instruction • clinical exercises simulation methods	Seminars: Final written test (>60%) Extended observation (>50%) Exercises: Final written test (>60%) Practical test under simulated conditions Scoring system 0-5 (pass mark from 3 points)

		Tutorials: The graduate knows and understands/is able to/is ready to: E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information; K_K08 formulate opinions based on own assessment and observation;		
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		K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Obstetrics and Gynaecology	Lectures: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; D.W13. forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the principles for dealing with suspected violence, including the "Blue Card" (<i>Niebieska Karta</i>) procedure; E.W6. basic foetal diagnosis and therapy; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W10. the most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal, e) oncological and haematological, f) diabetes and endocrinology,	Lectures: • informative lecture • case analysis • exposing methods Seminars: • didactic discussion • show • exposing methods • brainstorm Tutorials: • simulation tasks • case analysis. • physical and subjective examination of patients • observation and assistance in obstetric and gynaecological procedures and surgeries • observation of medical work • expository methods	Lectures: Final exam (> 60%) Extended observation (> 60%) Seminars: Final exam (> 60%) Extended observation (> 60%) Presentation on a given topic (>60%) Tutorials: Final exam (> 60%) Extended observation (> 60%)

		g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W11. principles for dealing with suspected sexual violence; F.W15. female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures; G.W21. epidemiology of cancer, in particular nutritional, environmental and other lifestyle-related determinants of cancer risk; G.W22. importance of screening tests in oncology, including the risks associated with diagnostic tests for healthy individuals, and the health benefits in relation to the most common cancers in the Republic of Poland. Seminars: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; D.W13. forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the principles for dealing with suspected violence, including the "Blue Card" (<i>Niebieska Karta</i>) procedure; E.W6. basic foetal diagnosis and therapy;		
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		F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W10. the most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W11. principles for dealing with suspected sexual violence; F.W15. female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures; G.W21. the epidemiology of cancer, in particular nutritional, environmental and other lifestyle-related determinants of cancer risk;		
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		G.W22. the importance of screening tests in oncology, including the risks associated with diagnostic tests for healthy individuals, and the health benefits in relation to the most common cancers in the Republic of Poland; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety. Tutorials: The graduate knows and understands/is able to/is ready to: E.U4. perform a targeted physical examination of breast and prostate gland in adults; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; E.U22. apply rational antibiotic therapy depending on the patient's clinical condition;	
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		F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure; F.U13. apply proper medical treatment in the case of physiological pregnancy and postpartum in accordance with the standards of perinatal care; F.U14. recognise the most common symptoms indicating an abnormal course of pregnancy and postpartum, apply and interpret diagnostic tests, perform differential diagnosis, implement therapy, monitor treatment effects and evaluate indications for specialist consultation, especially in the case of abdominal pain, uterine contractions, vaginal bleeding, abnormal heart rate and foetal movement, hypertension; F.U15. detect and interpret foetal heart activity; F.U16. recognise the beginning of labor and symptoms of abnormal labor; F.U17. assist in physiological childbirth; F.U18. apply proper medical treatment in case of abnormal bleeding from the genital tract, amenorrhea, pelvic pain (pelvic inflammatory disease, ectopic pregnancy), vaginitis and vulvitis, sexually transmitted diseases; F.U19. apply proper medical treatment in the field of birth control; H.U5. perform intravenous, intramuscular and subcutaneous administration of the drug; H.U9. take swabs for microbiological and cytological tests; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists,	
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		including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Neurosurgery with Elements of Neurooncology	Seminars: The graduate knows and understands/is able to/is ready to: E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease; 8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W20. issues in neurology and neurosurgery, in particular the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of the central nervous system as regards:	Seminars: informative lecture problem-based lecture didactic discussion case analysis Tutorials: case analysis didactic discussion clinical tasks case study electronic health records demonstration	Seminars: Oral exam (>75%) Extended observation (>50%) Tutorials: Oral and practical exam (>75%, scoring system 0-1) Extended observation (>50%)

		1) cerebral oedema and its sequelae, with particular reference to emergencies; 2) other forms of intracranial constriction with their consequences; 3) craniocerebral trauma; 4) vascular malformations of the central nervous system; 5) neoplastic tumours of the central nervous system; 6) diseases of the spine and spinal cord; E.U12. recognise conditions requiring hospital treatment; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: E.W16. environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common neurological diseases and their complications: 1) headaches, including migraine, tension headache and headache syndromes and V nerve neuralgia; 2) cerebrovascular diseases, in particular stroke; 3) epilepsy; 4) infections of the nervous system, in particular meningitis, Lyme disease, herpes encephalitis, neurotransmission diseases; 5) dementias, in particular Alzheimer's disease, frontal dementia, vascular dementia and other dementia syndromes; 6) diseases of the basal nuclei, in particular Parkinson's disease; 7) diseases of the basal nuclei, in particular Parkinson's disease;		
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		8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis, sciatica, compression neuropathies; 9) craniocerebral trauma, in particular concussion; 10) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W20. issues in neurology and neurosurgery, in particular the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of the central nervous system as regards: 1) cerebral oedema and its sequelae, with particular reference to emergencies; 2) other forms of intracranial constriction with their consequences; 3) craniocerebral trauma; 4) vascular malformations of the central nervous system; 5) neoplastic tumours of the central nervous system; 6) diseases of the spine and spinal cord E.U12. recognise conditions requiring hospital treatment; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Urology and Andrology	Lectures: The graduate knows and understands/is able to/is ready to:	Lectures: • informative lecture • didactic discussion	Lectures: • Extended observation (assessment method 0-10 points; >60%) (K1-K3)

		F.W1. causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) chest diseases; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancer; F.W2. causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common congenital defects and diseases requiring treatment surgical procedure in children; Tutorials: The graduate knows and understands/is able to/is ready to: F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with analgesic therapy and monitoring postoperative care; E.U4. perform a focused adult breast physical examination and prostate gland; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor treatment effects and assess indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite; 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) swelling; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) shortness of breath; 13) discharge from the nose and ear;	Seminars: • didactic discussion • case analysis Tutorials: • analysis and interpretation of results • case analysis • didactic discussion • demonstration with instruction • course tasks	• Final exam with grade (W1-W6, U1-U6) The condition for obtaining final credit is passing the final exam in the form of a test (obtaining at least 60% of points) Seminars: • Extended observation (assessment method 0-10 points; >60%) (K1-K3) • Final exam with grade (W1-W6, U1-U6) The condition for obtaining a final pass is passing the final exam in the form of a test (obtaining at least 60% of points) Tutorials: • Extended observation (assessment method 0-10 points; >60%) (K1-K3) • Final exam with grade (W1-W6, U1-U6) The condition for obtaining a final pass is passing the final exam in the form of a test (obtaining at least 60% of points) The student will receive credit for the course by obtaining a positive grade in the final exam and a positive grade in extended observation, which are a prerequisite for taking the final exam.
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		14) chest pain; 15) heart palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorders; 19) abdominal pain; 20) presence of blood in the stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and resistance in the abdominal cavity; 24) anaemia; 25) lymphadenopathy; 26) urination disorders; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive disorders; 31) headache; 32) dizziness; 33) paresis; 34) convulsions; 35) back pain; 36) joint pain; 37) injury or burn; 38) dehydration and overhydration; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or procedure requiring sterility, prepare the surgical field according to aseptic rules and participate in surgery; K_K01 establishing and maintaining deep and respectful contact with the patient, as well as showing understanding for ideological and cultural differences; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K07 using objective sources of information. Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic procedures		
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		in the case of the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) chest diseases; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancer F.W2. causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common congenital defects and diseases requiring treatment surgical procedure in children; F.W6. principles of perioperative safety, patient preparation for surgery, performing general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with analgesic therapy and monitoring postoperative care; E.U4. perform a focused adult breast physical examination and prostate gland; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor treatment effects and assess indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite; 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) swelling; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) shortness of breath; 13) discharge from the nose and ear; 14) chest pain; 15) heart palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorders; 19) abdominal pain; 20) presence of blood in the stool; 21) constipation and diarrhoea; 22) jaundice;	
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		23) bloating and resistance in the abdominal cavity; 24) anaemia; 25) lymphadenopathy; 26) urination disorders; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive disorders; 31) headache; 32) dizziness; 33) paresis; 34) convulsions; 35) back pain; 36) joint pain; 37) injury or burn; 38) dehydration and overhydration;		
	Pediatric Surgery	Seminars: The graduate knows and understands/is able to/is ready to: A.W1: describe the structure of the human body in a topographic and functional approach, including topographic relations between individual organs, along with anatomical, histological and embryological nomenclature; AW.4.classifies the stages of development of the human embryo, the structure and function of foetal membranes and the placenta, the stages of development of individual organs and the impact of harmful factors on the development of the embryo and foetus (teratogenic); C.W2: explain the genetic causes of hereditary predisposition to cancer; E.W3. explain the environmental and epidemiological conditions, lists the causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases occurring in children and their complications: 1) water-electrolyte and acid-base disorders; 2) heart defects, 3) respiratory diseases, including congenital defects of the respiratory system, bronchiectasis, respiratory infections, 4) anaemia, bleeding disorders, bone marrow failure, childhood cancers,	Seminars: • discussion • case studies • problem-based learning • decision tree Tutorials: • demonstration with instruction • course tasks simulation methods (case study)	Seminars: Credit with grade - written test (>=60%): W1-W16, U1-U11 Tutorials: Practical test (0-1 scoring system): U1-U11 Extended observation (>50%): K1-6

		including solid tumors typical of childhood, primary and secondary immunodeficiencies; 5) acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel diseases, pancreatic diseases, cholestasis, liver diseases, food allergies, congenital defects of the gastrointestinal tract; 6) urinary tract infections, urination disorders, congenital defects of the urinary tract, vesicoureteral reflux disease, nephrolithiasis, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetically determined kidney diseases, nephrogenic hypertension; 7) growth disorders, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, obesity, puberty disorders, gonadal disorders; 8) cerebral palsy, encephalitis and meningitis, convulsions, epilepsy; 9) the most common infectious diseases of childhood; 10) causes of osteoarticular pain (non-inflammatory, infectious and reactive arthritis and juvenile spondyloarthropathy; E.W4.lists the effects resulting from the syndrome of a battered child and a sexually abused child and describes the principles of intervention in the case of such patients; E.W5. describe the problems of a child with mental retardation, behavioural disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children; E.W9. describe the principles of nutritional treatment and fluid therapy in various disease states; E.W14.classify the types of vascular access and justifies their use, especially in oncology; E.W24. describe issues in the field of oncology, including: 1) genetic, environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic procedures in the most common cancers and their complications;		
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		2) the most common paraneoplastic syndromes and their clinical symptoms; 3) basics of early detection of cancer, principles of screening tests and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies as well as targeted and personalized treatment; 5) early and long-term complications of oncological treatment; 6) role of supportive treatment, including nutritional treatment; 7) principles of organizing care for oncological patients, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles of interpretation of clinical trial results; 9) most important scales and classifications used in oncology; 10) principles of conducting targeted physical examinations of adults regarding the breast and prostate gland; 11) principles of planning diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation; F.W1 explain the causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) chest diseases; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancer; F.W2.classify causes, describes symptoms, principles of diagnosis and therapeutic procedures in the case of the most common congenital defects and diseases requiring surgical treatment in children; F.W3. list and describe basic classic and minimally invasive treatment techniques; D.U1: apply ethical patterns in professional activities, including the ability to plan and conduct a therapeutic		
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		process in accordance with ethical values and the idea of humanism in medicine; D.U3.apply the principles of respecting patient rights; E.U10: diagnoses the most common symptoms of the disease in children, proposes diagnostic tests and interprets their results, performs differential diagnosis, implements therapy, monitors the effects of treatment and assesses indications for specialist consultation, in particular in the case of symptoms such as: 1) fever; 2) coughing and expectoration; 3) shortness of breath; 4) discharge from the nose and ear; 5) urination disorders; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) heart palpitations; 12) fainting; 13) osteoarticular pain; 14) swelling; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in the stool; 19) dehydration; 20) jaundice; 21) cyanosis. Tutorials: The graduate knows and understands/is able to/is ready to: F.W1 explain the causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) chest diseases; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancer; F.W2.classify causes, describe symptoms, principles of diagnosis and therapeutic		
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		procedures in the case of the most common congenital defects and diseases requiring surgical treatment in children; F.W3. list and describe basic classic and minimally invasive treatment techniques F.W4. explain the rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures as well as the most common complications (F.W6. describe the principles of perioperative safety, patient preparation for surgery, general and local anaesthesia and controlled sedation) F.W7.: principles of postoperative treatment with analgesic therapy and postoperative monitoring F.W10.describe the most common life-threatening conditions in children and explains the differences in adults and the rules of conduct in these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhages; 4) water-electrolyte and acid-base disorders; 5) poisonings; 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal, e) oncology and haematology, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology, i) ENT, j) gynecological, obstetric and urological D.U1 apply ethical patterns in professional activities, including the ability to plan and conduct a therapeutic process in accordance with ethical values and the idea of humanism in medicine; D.U3 apply the principles of respecting patient's rights; D.U12. recognise and analyse difficult situations and challenges related to communication, including crying, strong emotions, anxiety, interruptions in speech, embarrassing and sensitive issues, silence,	
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		withdrawal, aggressive and demanding behaviour, and cope with them in a constructive way; E.U2. conduct an interview with the child and his/her caregivers, using skills related to the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; E.U6 perform a complete and focused physical examination of a child from the neonatal period to adolescence, adapted to a specific clinical situation, including examination of: 1) general paediatrics; 2) neurological; 3) musculoskeletal system; 4) ophthalmological; 5) otolaryngological E.U10 recognise the most common symptoms of the disease in children, propose diagnostic tests and interpret their results, perform differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation, in particular in the case of symptoms such as: 1) fever; 2) coughing and expectoration; 3) shortness of breath; 4) discharge from the nose and ear; 5) urination disorders; 6) rash; 7) anaemia; 8) eating disorders; 9) growth disorders; 10) convulsions and disturbances of consciousness; 11) heart palpitations; 12) fainting; 13) osteoarticular pain; 14) swelling; 15) lymphadenopathy; 16) abdominal pain; 17) constipation and diarrhoea; 18) presence of blood in the stool; 19) dehydration; 20) jaundice; 21) cyanosis; E.U14. perform and document medical procedures and procedures, including:		
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		1) measurement and assessment of basic vital functions (temperature, heart rate, pressure blood vessels) and monitoring them using a cardiomonitor and a pulse oximeter; 2) oxygen therapy using non-invasive methods; 5) non-instrumental and instrumental unblocking of the respiratory tract; 6) intravenous, intramuscular and subcutaneous drug administration; 7) collecting and securing blood for laboratory tests, including microbiological; 8) taking swabs for microbiological and cytological tests; 9) urinary bladder catheterization in women and men; 10) insertion of a gastric tube; 11) rectal enema; 12) pleural procedures: puncture and decompression of pneumothorax; 13) ultrasound examination in life-threatening conditions according to the FAST (Focused Assessment with Sonography in Trauma) protocol or its equivalent, and interpret its result; F.U1 perform the procedure of surgical hand washing, put on and take off sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with the principles of asepsis and participate in the surgical procedure; F.U2 carry out the procedure of applying and changing a sterile dressing on the surgical wound; G.U7) conduct an examination of the patient and recognise and document behaviours and symptoms indicating the possibility of violence, including domestic violence; K_K01 demonstrate the principles of establishing and maintaining deep and respectful contact with the patient, as well as show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 respect medical confidentiality and patient rights;		
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		K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Otolaryngology	Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W19. issues in laryngology, phoniatrics and audiology, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx and larynx; 2) diseases of the facial nerve and selected structures of the neck; 3) principles of diagnostic and therapeutic management of mechanical injuries of the ear, nose, larynx and oesophagus; 4) principles of diagnostic and therapeutic management of hearing, voice and speech disorders; E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) the most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment;	Seminars: • Informative seminar • Conversational seminar • Didactic discussion • Case analysis Tutorials: • demonstration with instruction • course tutorials • simulation methods (case study; simulated patient)	Questions from the seminar on the exam W1-W3, W10, W12, W14 - W18, W21 - W27, W29 - W30, U2-U16 credit above 60% Tutorials: 1. Written test - entrance test (0 - 20 points; credit rate above 60%); 2. Practical test at the end of the tutorials (grades in the range of 2-5, grade 2 - failed, grade 3-5 passed): W1-4, W23, U1 - U12, K1 – K3,

		6) role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; Tutorials:		
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		The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W19. issues in laryngology, phoniatrics and audiology, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx and larynx; 2) diseases of the facial nerve and selected structures of the neck; 3) principles of diagnostic and therapeutic management of mechanical injuries of the ear, nose, larynx and oesophagus; 4) principles of diagnostic and therapeutic management of hearing, voice and speech disorders; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; E.W24. issues in oncology, including: 1) genetic, environmental and epidemiological background, causes, symptoms, principles of diagnosis and therapeutic management of the most common cancers and their complications; 2) most common paraneoplastic syndromes and their clinical manifestations; 3) basics of early cancer detection, principles of screening and preventive measures in oncology; 4) possibilities and limitations of modern cancer treatment (surgical methods, radiotherapy and systemic methods, including immunotherapy), indications for cell and gene therapies and targeted and personalised treatment; 5) early and distant complications of oncological treatment;		
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		6) the role of supportive treatment, including nutrition treatment; 7) principles for organising cancer care, including genetic counselling and multidisciplinary care; 8) practical aspects of statistics in oncology, including principles for the interpretation of clinical findings; 9) main scales and classifications used in oncology; 10) principles of targeted physical examination of the breast and prostate in adults; 11) principles for planning the diagnostic, therapeutic and preventive management and prophylactic cancer treatment on the basis of the results of examinations and the medical records provided; F.W10. the most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives;		
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		E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including: 1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U9. recognise the most common symptoms of disease in adults, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor the effects of treatment and assess the indications for specialist consultation, particularly for symptoms such as: 1) fever; 2) weakness; 3) loss of appetite 4) weight loss; 5) shock; 6) cardiac arrest; 7) disturbance of consciousness, including fainting; 8) oedema; 9) rash; 10) coughing and expectoration; 11) haemoptysis; 12) dyspnoea; 13) nasal and ear discharge; 14) chest pain; 15) palpitations; 16) cyanosis; 17) nausea and vomiting; 18) swallowing disorder; 19) abdominal pain; 20) presence of blood in stool; 21) constipation and diarrhoea; 22) jaundice; 23) bloating and abdominal resistance; 24) anaemia; 25) lymphadenopathy; 26) urinary disturbances; 27) haematuria and proteinuria; 28) menstrual disorders; 29) depressed mood and anxiety; 30) memory and cognitive dysfunction; 31) headache; 32) dizziness; 33) paresis;		
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		34) seizures; 35) back pain; 36) joint pain; 37) trauma or burn; 38) dehydration and overhydration; E.U12. recognise conditions requiring hospital treatment; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure, arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; E.U19. plan diagnostic, therapeutic and preventive management of		
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		cancer treatment on the basis of test results and medical documentation provided; E.U21. conduct patient health education, including nutrition education tailored to individual needs; E.U22. apply rational antibiotic therapy depending on the patient's clinical condition; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K06 promote health behaviours; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Ophthalmology	Seminars: The graduate knows and understands/is able to/is ready to: E.U12. recognise conditions requiring hospital treatment; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W10. the most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders;	Seminars: - didactic discussion - films, demonstrative display - analysis of case reports Tutorials: - clinical practice - display with training - clinical case study - presentation of the surgical instrumentation in ophthalmology - simulation methods	Seminars: Theoretical (written) exam (>60%) Extended observation (>50%) Tutorials: Practical exam (>60%) Multimedia presentation (scoring system 0-1) Extended observation (>50%)

		5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W18. issues in the field of ophthalmic diseases, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management of the most common ocular diseases; 2) ophthalmic complications of systemic diseases together with their symptomatology and methods of management in these cases; 3) surgical management of specific diseases of the eye; 4) groups of systemic drugs with associated ophthalmic complications and contraindications and their mechanism of action; F.U20. recognise ophthalmological conditions requiring urgent specialist assistance and provide initial pre-hospital assistance in cases of physical and chemical injuries to the eye. Tutorials: The graduate knows and understands/is able to/is ready to: E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U2. interview the child and their carers, using skills on the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U5. carry out a complete and focused physical examination of an adult tailored to the specific clinical situation, including:		
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		1) general internal medicine; 2) neurological; 3) gynaecological; 4) musculoskeletal; 5) ophthalmology; 6) otolaryngology 7) geriatric; E.U6. perform a complete and focused physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation, including: 1) general paediatric; 2) neurological; 3) musculoskeletal system; 4) ophthalmology; 5) otolaryngology; E.U12. recognise conditions requiring hospital treatment; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W18. issues in the field of ophthalmic diseases, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management of the most common ocular diseases; 2) ophthalmic complications of systemic diseases together with their symptomatology and methods of management in these cases; 3) surgical management of specific diseases of the eye; 4) groups of systemic drugs with associated ophthalmic complications and contraindications and their mechanism of action; F.U20. recognise ophthalmological conditions requiring urgent specialist assistance and provide initial pre-hospital assistance in cases of physical and chemical injuries to the eye; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
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	Plastic Surgery	Seminars: The graduate knows and understands/is able to/is ready to: A.W1. structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; B.W18. functions and applications of stem cells in medicine; B.W21. processes of ageing and changes in organ function associated with ageing; C.W17. principles of disinfection, sterilisation and aseptic management; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; E.U18. maintain patient medical records, also in electronic form, in accordance with the law; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W19. issues in laryngology, phoniatrics and audiology, in particular:	Seminars: • informative lecture • conversational lecture • educational discussion • analysis of case reports Tutorials: • demonstrations with instructions • development and improvement of practical skills • analysis of case reports • utilization of medical simulation methods	Seminars: Final test ($\geq 60\%$) Oral test ($> 75\%$) Extended observation ($> 50\%$) Tutorials: Oral test ($> 75\%$) Practical test (scoring system 0-1) Final written test ($\geq 60\%$) Extended observation ($> 50\%$)
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		1) causes, symptoms, principles of diagnosis and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx and larynx; 2) diseases of the facial nerve and selected structures of the neck; 3) principles of diagnostic and therapeutic management of mechanical injuries of the ear, nose, larynx and oesophagus; 4) principles of diagnostic and therapeutic management of hearing, voice and speech disorders; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment. Tutorials: The graduate knows and understands/is able to/is ready to: A.W1.structure of the human body in a topographical and functional approach, including topographical relationships between different organs, including anatomical, histological and embryological terminology; B.W18. functions and applications of stem cells in medicine; B.W21. processes of ageing and changes in organ function associated with ageing; C.W17. principles of disinfection, sterilisation and aseptic management; C.W23. clinical course of specific and non-specific inflammation and the processes of tissue and organ regeneration; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children;		
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		E.U18. maintain patient medical records, also in electronic form, in accordance with the law; F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W19. issues in laryngology, phoniatics and audiology, in particular: 1) causes, symptoms, principles of diagnosis and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx and larynx; 2) diseases of the facial nerve and selected structures of the neck; 3) principles of diagnostic and therapeutic management of mechanical injuries of the ear, nose, larynx and oesophagus; 4) principles of diagnostic and therapeutic management of hearing, voice and speech disorders; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; F.U2. apply and change a sterile dressing; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights;		
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		K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Anaesthesiology and Intensive Therapy	Seminars: The graduate knows and understands/is able to/is ready to: B.W1. water and electrolyte management in biological systems; B.W2. acid-base balance and the mechanism of action of buffers and their importance in body homeostasis; B.W20. function and regulatory mechanisms of all organs and systems of the human body and the relationships between them; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; E.W9. principles of nutritional and fluid therapy in various disease states; E.W14. types of vascular access and their application, in particular in oncology; E.W27. classification of pain (acute and chronic or nociceptive, neuropathic and nociplastic) and its causes, pain assessment tools and principles of its pharmacological and non-pharmacological treatment; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.W6. principles of perioperative safety, preparation of the patient for surgery, performance of general and local anaesthesia and controlled sedation; F.W7. principles of postoperative treatment with pain therapy and monitoring post-operative care; F.W8. indications and principles of intensive care;	Seminars: • Online informative lecture: an indirect format with the possibility to ask questions Tutorials: • Demonstration with instruction • Course-specific exercises • Case analysis • Simulation methods (case study; simulated patient) • Simulation methods (medical procedures techniques)	Seminars: Entry requirements: Entrance quiz (>60%) Seminars: Oral final quiz, Exam (>60%) Tutorials: Practical test (0-1 system) Extended observation (>50%)

		F.W9. guidelines for cardiopulmonary resuscitation of neonates, children and adults; F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W13. invasive methods of pain management; F.W14. F.W14. principles of management of central long-standing venous catheters; F.W15. female reproductive functions, the disorders associated with them and the management of diagnostic and therapeutic management concerning in particular: 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract; 5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures; F.W22. conditions where life expectancy, functional status or patient preference limit management according to disease-specific guidelines. Tutorials:		
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		The graduate knows and understands/is able to/is ready to: B.U11. plan and carry out scientific research and interpret the results and formulate conclusions; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; E.U1. interview an adult, including an older person, using skills relating to the content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2. various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema;		
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		17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; E.U16. determine the patient's death; F.W9. guidelines for cardiopulmonary resuscitation of neonates, children and adults; E.U21. conduct patient health education, including nutrition education tailored to individual needs; F.W14. the principles of management of central long-standing venous catheters; F.W22. conditions where life expectancy, functional status or patient preference limit management according to disease-specific guidelines; F.U4. recognise the most common life-threatening conditions, including using various imaging techniques; F.U9. conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC); F.U11. perform basic life support in adults, including using an automatic external defibrillator, in accordance with ERC guidelines; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs.		
	Emergency Medicine	Lectures: The graduate knows and understands/is able to/is ready to: E.W40. possibilities and limitations of laboratory tests;	Lectures: • informative lecture • conversational lecture Seminars: • informative seminar • conversational seminar • didactic discussion	Lectures: Practical test (scoring system 0-1) Extended observation (> 50%) Seminars: Practical test (scoring system 0-1) Extended observation (> 50%)

		F.W9. guidelines for cardiopulmonary resuscitation of neonates, children and adults; F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; F.W12. principles of operation of the integrated system of Emergency Medical Services; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Seminars: The graduate knows and understands/is able to/is ready to: E.W40. possibilities and limitations of laboratory tests; F.W9. guidelines for cardiopulmonary resuscitation of neonates, children and adults; F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning	Tutorials: • demonstration with instruction • course tasks • simulation methods (case study; simulated patient) • didactic workshops • case study	Tutorials: Practical test (scoring system 0-1) Extended observation (> 50%)
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		6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology F.W12. principles of operation of the integrated system of Emergency Medical Services; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs. Tutorials: The graduate knows and understands/is able to/is ready to: F.U3. assess and treat a simple wound, including local anaesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing; F.U4. recognise the most common life-threatening conditions, including using various imaging techniques; F.U6. temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing; F.U7. immobilize the cervical and thoracolumbar spine after injury; F.U8. treat external bleeding; F.U9. conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC); F.U10. conduct advanced life support in neonates (Newborn Life Support, NLS) and children (Pediatric Advanced Life Support, PALS) in accordance with ERC guidelines; F.U11. perform basic life support in adults, including using an automatic		
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		external defibrillator, in accordance with ERC guidelines; F.U12. conduct advanced life support (ALS) in adults in accordance with ERC guidelines; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Introduction to Dentistry	Seminars: The graduate knows and understands/is able to/is ready to: F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications. Tutorials: The graduate knows and understands/is able to/is ready to:	Seminars: • educational discussion • informative lecture • analysis of case reports Tutorials: • simulation methods • educational discussion • analysis of case reports	Seminars: Final written test ($\geq 60\%$) Tutorials: Final written test ($\geq 60\%$) Tasks and skills implementation (scoring system 0-1) Extended observation ($> 50\%$)

		F.W1. causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases; 2) diseases of the thorax; 3) diseases of the limbs, head and neck; 4) bone fractures and organ injuries; 5) cancers; F.W3. basic classical and minimally invasive surgical techniques; F.W4. eligibility rules for basic surgery and invasive diagnostic and treatment procedures and the most common complications; F.U1. wash hands surgically, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with aseptic rules, and participate in the surgical procedure; F.U3. assess and treat a simple wound, including local anaesthesia (superficial, infiltration), applying and removing surgical sutures, applying and changing a sterile surgical dressing; F.U4. recognise the most common life-threatening conditions, including using various imaging techniques; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K06 promote health behaviours.		
	First Aid	Lectures: The graduate knows and understands/is able to/is ready to: B.W8. physical basis of selected therapeutic techniques; C.W13. consequences of exposure of the human body to chemical and physical agents and principles of its prevention; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic	Lectures • informative lecture • conversational lecture • educational discussion • analysis of case reports Tutorials: • demonstrations with instructions • development and improvement of practical skills • analysis of case reports • utilization of medical simulation methods	Lectures: Final test ($\geq 60\%$) Extended observation ($> 50\%$) Tutorials: Oral test ($> 75\%$) Practical test (scoring system 0-1) Final written test ($\geq 60\%$) Extended observation ($> 50\%$)

		diseases and water-electrolyte, endocrine and acid-base disorders; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; D.W20. concepts of patient safety and safety culture and their organisational, communication and management aspects. D.U9. describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour; E.U3. take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness); F.W9. guidelines for cardiopulmonary resuscitation of neonates, children and adults; F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia; 7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; G.W5. legal regulations concerning patients' rights and the Patient Ombudsman, as well as legal regulations relevant to the medical activity in the field of labour law, the basis of the medical		
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		profession and the functioning of the medical self-government; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease. Tutorials: The graduate knows and understands/is able to/is ready to: B.W8. physical basis of selected therapeutic techniques; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W13. consequences of exposure of the human body to chemical and physical agents and principles of its prevention; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; D.W20. concepts of patient safety and safety culture and their organisational, communication and management aspects; D.U9. describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour; E.U3. take a medical history in a life-threatening situation using the following scheme: SAMPLE (S - Symptoms, A - Allergies, M - Medications, P - Past medical history, L - Last meal, E - Events prior to injury/illness); F.W10. most common life-threatening conditions in children and adults and the management of these conditions, in particular in: 1) sepsis; 2) shock; 3) haemorrhage 4) water-electrolyte and acid-base disorders; 5) poisoning 6) burns, hypo- and hyperthermia;		
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		7) other acute conditions of origin: a) cardiovascular, b) respiratory, c) neurological, d) renal e) oncological and haematological, f) diabetes and endocrinology, g) psychiatric, h) ophthalmology i) ENT, j) gynaecology, obstetrics and urology; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade; 18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment		
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		with Sonography in Trauma) or equivalent, and interpret the its result; F.U6. temporarily immobilize the limb, and select the type of immobilization in typical clinical situations as well as check the proper blood supply to the limb after applying the immobilization dressing; F.U8. treat external bleeding; F.U9. conduct basic life support (BLS) in neonates and children in accordance with the guidelines of the European Resuscitation Council (ERC); F.U11. perform basic life support in adults, including using an automatic external defibrillator, in accordance with ERC guidelines; K_K02 consider patient's well-being as a priority; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease.		
	Techniques of Medical Procedures	Tutorials: The graduate knows and understands/is able to/is ready to: C.W17. principles of disinfection, sterilisation and aseptic management; C.W27. pathomechanism and clinical forms of the most common diseases of the various systems and organs, metabolic diseases and water-electrolyte, endocrine and acid-base disorders; C.W30. basic principles of pharmacotherapy taking into account its efficacy and safety, the need for individualisation of treatment, including that arising from pharmacogenetics; C.U7. relate images of tissue and organ damage to clinical signs of disease, history and laboratory findings to establish a diagnosis in the most common diseases of adults and children; C.U9. select drugs in appropriate doses to correct pathological phenomena in the human body and in individual organs; D.W20. concepts of patient safety and safety culture and their organisational, communication and management aspects.	Tutorials: • demonstrations with instructions • development and improvement of practical skills • didactic workshops with the use of medical equipment • utilization of medical simulation methods (case study of simulated patient)	Tutorials: Oral test (> 75%) Practical test - module (pass/fail) Final practical test (pass/fail) Final written test - module (>60%) Extended observation (> 50%)

		D.U9. describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour; E.W27. classification of pain (acute and chronic or nociceptive, neuropathic and nociplastic) and its causes, pain assessment tools and principles of its pharmacological and non-pharmacological treatment; E.W39. types of biological materials used in laboratory diagnostics and principles of collecting material for tests; E.U14. perform medical procedures and treatments, including: 1) measuring and assessing basic vital functions (temperature, pulse, blood pressure arterial blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2) various forms of inhalation therapy, and make the choice of inhaler for the clinical condition of the patient; 3) measurement of peak expiratory flow; 4) oxygen therapy using non-invasive methods; 5) non-instrumented and instrumented airway management; 6) intravenous, intramuscular and subcutaneous drug administration; 7) drawing and securing blood for laboratory tests, including microbiology tests; 8) collection of arterialised blood and arterialised capillary blood; 9) collection of swabs for microbiological and cytological examinations; 10) catheterisation of the urinary bladder in male and female; 11) insertion of a gastric tube; 12) rectal infusion; 13) standard resting electrocardiogram, and interpret the result; 14) defibrillation, electrical cardioversion and external electro-stimulation; 15) strip testing, including glucose measurement using a glucometer; 16) pleural procedures: puncture and decompression of emphysema; 17) anterior nasal tamponade;		
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		18) ultrasound examination in life-threatening emergencies according to the FAST protocol (Focussed Assessment with Sonography in Trauma) or equivalent, and interpret the its result; K_K02 consider patient's well-being as a priority; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease;; K_K08 formulate opinions based on own assessment and observation K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
Group G	Hygiene and Epidemiology	Lectures: G.W1. methods for assessing individual and population health, measures and principles for monitoring population health, disease classification systems and medical procedures; G.W2. determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine; G.W3. the epidemiology of infectious diseases, including those related to health care, and the non- infectious ones, types and modes of prevention at different stages of the natural history of disease, and the role and principles of epidemiological surveillance; G.W21. the epidemiology of cancer, in particular nutritional, environmental and other lifestyle-related determinants of cancer risk; G.W22. the importance of screening tests in oncology, including the risks associated with diagnostic tests for healthy individuals, and the health benefits in relation to the most common cancers in the Republic of Poland;	Lectures: - informative lecture - conversational lecture - educational discussion Tutorials: - practical project (written reports) - educational discussion - reports - team work	Report - theoretical preparation and correct execution of data analysis along with a written report. Final pass in the form of a written test (30 MCQ test questions covering issues from lectures and tutorials (learning outcomes): Assessment criteria: 60-67% - pass 68-75% - pass + 76-83% - above average 84-91% - above average + 92-100% - excellent Extended observation (0-10 points; >50%):

		E.W31. the basic issues of prevention and the management of occupational exposure to hazardous and noxious agents; C.W36. the symptoms of the most common acute poisonings with selected groups of drugs, alcohol and other psychoactive substances, fungi and heavy metals; E.W38. principles of health-oriented behaviour, basics of prevention and early detection of the most common civilisation diseases and principles of screening for these diseases; B.U1. use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body; G.U1. describe the demographic structure of the population and, on this basis, assess and predict health problems of the population; G.U4. assess the epidemiological situation of infectious and non-infectious diseases in the Republic of Poland and in the world; K_K08 formulate opinions based on own assessment and observation. Tutorials: The graduate knows and understands/is able to/is ready to: G.W1. methods for assessing individual and population health, measures and principles for monitoring population health, disease classification systems and medical procedures; G.W2. determinants of disease, ways of identifying and analysing disease risk factors, advantages and disadvantages of epidemiological studies and principles of causal inference in medicine;		
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		G.U4. assess the epidemiological situation of infectious and non-infectious diseases in the Republic of Poland and in the world; G.U3. interpret positive and negative measures of health; G.U2. collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention; K_K08 formulate opinions based on own assessment and observation.		
	Public Health	Lectures: The graduate knows and understands/is able to/is ready to: D.W3. human behaviour that promotes health maintenance and the principles of motivating the patient towards health-promoting behaviour (Prochaska and DiClemente model of change, motivational interviewing); G.W4. concept and functions of public health, the concept, tasks and methods of health promotion, the concept of quality in health care and the factors influencing it, the structure and organisation of the health care system at national and global level, and the impact of economic conditions on health care options; G.W1. methods for assessing individual and population health, measures and principles for monitoring population health, disease classification systems and medical procedures G.W6. legal regulations on the organisation and financing of the health care system, the provision of health services financed from public funds and the principles of organisation of medical entities, the principles of operation of information and communication tools and services in health care (e-health); E.W38. principles of health-oriented behaviour, basics of prevention and early detection of the most common civilisation diseases and principles of screening for these diseases;	Lectures: • informative lecture • conversational lecture • educational discussion Seminars: • practical project (written reports), • educational discussion, • team work	Lectures: - final credit is carried out in the form of a written test (20MCQ) covering of the lectures and seminars, passing the > 60%). Seminars: - active involve in classes, - theoretical preparation and correct performance of data analyses with a written report, - extended observation of social competences during classes (0-10 points, passing the > 50%), - absences must be justified and graded orally or in a written form. Student should make up missing classes in a form and date appointed by coordinator of the course.

		G.W21. epidemiology of cancer, in particular nutritional, environmental and other lifestyle-related determinants of cancer risk; G.W22. importance of screening tests in oncology, including the risks associated with diagnostic tests for healthy individuals, and the health benefits in relation to the most common cancers in the Republic of Poland; K_K08 formulate opinions based on own assessment and observation. Seminars: The graduate knows and understands/is able to/is ready to: G.U1. describe the demographic structure of the population and, on this basis, assess and predict health problems of the population; G.U3. interpret positive and negative measures of health; B.U1. use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body; G.U2. collect information on the conditions and presence of risk factors for infectious and non-infectious diseases and plan preventive activities at various levels of prevention; G.U1. describe the demographic structure of the population and, on this basis, assess and predict health problems of the population; K_K08 formulate opinions based on own assessment and observation.		
	Forensic Medicine with Elements of Law	Lectures: The graduate knows and understands/is able to/is ready to: C.W37: basic principles of diagnostic and therapeutic procedures in poisoning; E.W19: issues of suicidal behavior;	Lectures: • Informative lecture • Didactic discussion • Case analysis • Computer-assisted learning – video Tutorials: • Demonstration with instruction	Oral test (> 75%) Final written test (≥60%),

		E.W4: issues of an abused child and a sexually abused child and the principles of intervention in the case of such patients; G.W7: legal obligations of a doctor in terms of confirming a patient's death; G.W10: legal regulations regarding the doctor's obligations in the event of suspicion of domestic violence; G.W12: legal regulations regarding medical confidentiality, criminal, civil and professional liability of a doctor, the rules of maintaining, storing and sharing medical records, including e-documentation, and the protection of personal data; G.W15: principles of forensic medical diagnosis and opinions in cases involving infanticide and reconstruction of the circumstances of a road accident; G.W18: concept and typology of adverse events, including medical errors and medical events, their most common causes, effects, principles of prevention and opinions in such cases; G.W20: legal regulations regarding the transfer of information regarding the patient's health during life and after his death, taking into account the scope of information, the group of persons entitled to obtain information and the rules for its transfer to other persons, as well as limitations on the scope of information transferred; G.U8: act in a way that prevents undesirable events and ensures maintaining quality in the protection of patient's health and safety, monitors the occurrence of adverse events and responds to them, informs about their occurrence and analyzes their causes; K_K05: notice and recognise own limitations and self-assess educational deficits and needs. Tutorials:	• Course tasks • Laboratory exercises • Didactic discussion	Extended observation (> 50%)
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		The graduate knows and understands/is able to/is ready to: G.W13: concept of violent death and sudden death and the differences between trauma and injury; G. W14: legal basis and rules of conduct of a doctor when examining a corpse at the place where it was discovered and the forensic medical examination of a corpse; G.W16: rules for preparing opinions as an expert; G.W17: principles of judicial and medical opinions regarding the ability to participate in procedural activities, biological effects and damage to health . G.W19: principles of collecting material for toxicological and hemogenetic tests; E.U11: recognise the symptoms of risky and harmful use of alcohol and problematic use of other psychoactive substances, symptoms of addiction to psychoactive substances and behavioral addictions, and propose appropriate therapeutic and medical procedures; G.U8: act in a way that prevents undesirable events and ensures maintaining quality in the protection of patient's health and safety, monitors the occurrence of adverse events and responds to them, informs about their occurrence and analyzes their causes; G.U9: collect blood for toxicological tests and secure material for haemogenetic tests; K_K01: establish and maintain deep and respectful contacts with the patient, as well as show understanding for ideological and cultural differences; K_K03: respect medical confidentiality and patient rights;		
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		K_K05: notice and recognise own limitations and self-assess educational deficits and needs.		
	Medical Law	D.W20: concepts of patient safety and safety culture and their aspects: organizational, communication and management; G.W5: legal regulations regarding patients' rights and the Patient Ombudsman, as well as important in the field of medical activity, legal regulations in the field of labor law, basics practicing the medical profession and functioning of the medical self-government; G.W6: legal regulations regarding the organization and financing of the health care system, providing health services financed from public funds and principles of organization of medical entities, principles of functioning of tools and services information and communication in health care (e-health); G.W7: doctor's legal obligations to confirm the patient's death; G.W8 legal regulations regarding medical experiments and research involving humans; G.W9: legal regulations regarding transplants, artificial procreation, termination of pregnancy, aesthetic treatments, palliative care, persistent therapy, mental illnesses, infectious diseases; G.W10: legal regulations regarding the doctor's obligations in the event of suspected violence in the family; G.W11: basic pharmaceutical law regulations, including the principles of marketing medicinal and medical products, issuing prescriptions, including e-prescriptions, reimbursement of medicines, cooperation between the doctor and the pharmacist, reporting of adverse drug reactions; G.W12: legal regulations regarding medical confidentiality, criminal and civil liability and professional doctor, principles of maintaining, storing and sharing medical documentation, including e-documentation, and personal data protection;	Lectures: discussion, essay preparing, case studies	Lectures: - activity during the course Seminar: -writing an essay (chosen topic concerning medical law issues) Alternative: - final test Assessment criteria: fail – 7 pts (0 - 55%) satisfactory – 8 pts (56 - 67%) satisfactory plus – 9 pts (68 - 75%) good – 10 pts (76 – 83%) good plus – 11 pts (84 - 91%) very good – 12 pts (92 - 100%)

		G.W20: legal regulations regarding the provision of information regarding the patient's health during his life and after his death, taking into account the scope of information, the group of authorized persons to obtain information and the rules for transmitting it to other people, as well limitations on the scope of information provided; G.U5: explain to recipients of health services their basic entitlements and the legal basis for the provision of those services; G.U6: issue medical certificates and medical certificates, prepare opinions for patient, authorized bodies and entities, prepare and maintain documentation medical (in electronic and paper form) and use tools and services information and communication in health care (e-health); K_K02: respecting medical confidentiality and patient rights; K_K05: noticing and recognizing one's own limitations and self-assessing educational deficits and needs.		
	Public Health – preparation for LEK			
Group H	Internal Diseases	Tutorials: The graduate knows and understands/is able to/is ready to: H.U1 measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them using a cardiomonitor and a pulse oximeter; H.U28 perform a complete and focused physical examination of the adult tailored to the specific clinical situation; H.U33 confirm the patient's death; H.U5 perform intravenous, intramuscular and subcutaneous administration of the drug; H.U14 perform a standard resting electrocardiogram and interpret its result; H.U15 perform defibrillation, electrical cardioversion, external electrostimulation;	Tutorials: • demonstration with instructions • improvement of practical skills • academic discussion • analysis of case reports • utilization of medical simulation methods	Practical test in clinical conditions (0-1 scoring system). Extended observation (> 50%).

		H.U31 obtain information from team members, respecting their diverse opinions and specialized competences, take this information into account in the patient's diagnostic and therapeutic plan, and apply ATMIST, RSVP/ISBAR protocols; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Paediatrics	Tutorials: The graduate knows and understands/is able to/is ready to: H.U1. measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them using a cardiomonitor and a pulse oximeter; H.U4. collect and secure blood and other biological material for laboratory tests, including microbiological ones; H.U6. perform various forms of inhalation therapy and select an inhaler appropriate to the clinical situation; H.U9. take swabs for microbiological and cytological tests; H.U24. use personal protective equipment appropriate to the clinical situation;	Tutorials: • clinical tutorials • demonstrations with added instructions • case studies • clinical discussion • utilization of medical simulation methods • problem-based learning	• Practical exam in clinical settings (scoring system 0-1) • Practical exam controlled with check-list (scoring system 0-3) • Practical exam in simulation settings (scoring system 0-1) • Extended observation (> 50%)

		H.U26. interview a child and his/her caregivers, using skills regarding the content, process and perception of communication, taking into account the biomedical and patient perspectives; H.U29. conduct a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to the specific clinical situation; H.U34. conduct check-up tests, including comparison of anthropometric and blood pressure measurements with data on percentile charts, and assess the degree of puberty; H.U35. qualify the patient for immunisation; H.U41. recognise the most common life-threatening conditions, with the application of various imaging techniques; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Surgery	H.U.1 measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them	Tutorials: • Bedside (clinical) • Assisting surgeries • Record - keeping	Clinical skill practical exam (0-1 grading, a skill is considered passed based on a proper practical performance):

		using a cardiomonitor and a pulse oximeter; H.U4 collect and secure blood and other biological material for laboratory tests, including microbiological ones; H.U5 perform intravenous, intramuscular and subcutaneous administration of the drug; H.U10 perform urinary bladder catheterization in a woman and a man; H.U11 insert a gastric tube; H.U12 perform a rectal enema; H.U13 perform pleural procedures: puncture and decompression of pneumothorax; H.U16 wash hands surgically, put on sterile gloves, dress for an operation or procedure requiring sterility, prepare the operating field in accordance with aseptic rules and participate in the surgical procedure; H.U17 apply and change a sterile dressing; H.U18 assess and treat a simple wound, including local anesthesia (superficial, infiltration), apply and remove surgical sutures, apply and change a sterile surgical dressing; H.U19 treat external bleeding; H.U33 confirm the patient's death; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K03 observe medical confidentiality and other patient rights; K_K07 use objective sources of information; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.	• Demonstration and instruction • Medical simulations	Practical exam in a simulated clinical setting (0-1 grading, a skill is considered passed based on a proper practical performance): depending on the technical possibilities of the facility. Extended observation (> 50%)
	Gynaecology and Obstetrics	Tutorials: The graduate knows and understands/is able to/is ready to:	Tutorials: • demonstration with instruction • subject exercises • simulation methods	Practical pass (> 60%) Extended follow-up (> 50%)

		H.U5. perform intravenous, intramuscular and subcutaneous administration of the drug; H.U9. take swabs for microbiological and cytological tests; H.U16. wash hands surgically, put on sterile gloves, dress for an operation or procedure requiring sterility, prepare the operating field in accordance with aseptic rules and participate in the surgical procedures; H.U28. perform a complete and focused physical examination of the adult tailored to the specific clinical situation; H.U43. perform detection and interpretation of foetal heart function; H.U44. perform activities while assisting in physiological childbirth; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.	exercises in the clinic's laboratories and clinics participation in medical procedures	
	Psychiatry – Practical Clinical Clerkship	Tutorials H.U25. interview an adult, including an older adult, using skills regarding the content, process and perception of communication, taking into account the	Tutorials: - development and improvement of practical skills - analysis of case reports - utilization of medical simulation methods	Tutorials: WRITTEN entry test – 20 test questions – (0-20 points; ≥60%,)

		biomedical perspective and the patient's perspective; H.U26. interview a child and his/her caregivers, using skills regarding the content, process and perception of communication, taking into account the biomedical and patient perspectives; H.U27. interview a patient in a life-threatening situation using the SAMPLE scheme; H.U28. perform a complete and focused physical examination of the adult tailored to the specific clinical situation; H.U29. conduct a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to the specific clinical situation; H.U30. convey unfavourable news using the selected protocol (e.g. SPIKES, EMPATHY, ABCDE), including supporting the family in the process of the patient dying with dignity and informing the family about the patient's death; H.U31. obtain information from team members, respecting their diverse opinions and specialized competences, take this information into account in the patient's diagnostic and therapeutic plan, and apply ATMIST, RSVP/ISBAR protocols; H.U32. conduct a psychiatric examination of the patient and assess his/her mental state; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease;	• expository methods: film	Tutorials: Practical test - psychiatric examination (0-30 points; $\geq 60\%$): Extended follow-up ($>60\%$):
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		K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Emergency Medicine	Tutorials: The graduate knows and understands/is able to/is ready to: H.U1. measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them using a cardiomonitor and a pulse oximeter; H.U2. perform non-instrumental and instrumental airway clearing; H.U4. collect and secure blood and other biological material for laboratory tests, including microbiological ones; H.U7. collect arterialised blood and arterialised capillary blood; H.U8. perform strip tests, including measuring glucose concentration using a glucometer; H.U13. perform pleural procedures: puncture and decompression of pneumothorax; H.U15. perform defibrillation, electrical cardioversion, external electrostimulation; H.U20. temporarily immobilize the limb, select the type of immobilization in typical clinical situations and check the proper blood supply to the limb after applying the immobilization dressing; H.U21. immobilize the cervical and thoracolumbar spine after injury;	Tutorials: - demonstrations instructions - development and improvement of practical skills in clinical settings - utilization of medical simulation methods (in clinical and medical simulation settings)	Tutorials: Practical test in a clinical setting (scoring system 0-1, assessment of the performed procedures) Practical test in a simulation setting (scoring system 0-1, assessment of the performed procedures) Extended observation (> 50%)

		H.U22. perform anterior nasal tamponade; H.U23. perform an ultrasound examination in life-threatening situations according to the FAST protocol or its equivalent and interpret its result; H.U24. use personal protective equipment appropriate to the clinical situation; H.U27. interview a patient in a life-threatening situation using the SAMPLE scheme; H.U28. perform a complete and focused physical examination of the adult tailored to the specific clinical situation; H.U30. convey unfavourable news using the selected protocol (e.g. SPIKES, EMPATHY, ABCDE), including supporting the family in the process of the patient dying with dignity and informing the family about the patient's death; H.U31. obtain information from team members, respecting their diverse opinions and specialized competences, take this information into account in the patient's diagnostic and therapeutic plan, and apply ATMIST, RSVP/ISBAR protocols; H.U36. perform oxygen therapy using non-invasive methods; H.U37. perform basic life support (BLS) in neonates and children in accordance with ERC guidelines; H.U38. perform advanced neonatal resuscitation (NLS) and paediatric resuscitation (PALS) in accordance with ERC guidelines; H.U39. perform basic life support (BLS) in adults, including using an automated external defibrillator, in accordance with ERC guidelines; H.U40. perform advanced life support (ALS) in adults in accordance with ERC guidelines; H.U41. recognise the most common life-threatening conditions, with the application of various imaging techniques;		
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		H.U42. recognise ophthalmological conditions requiring urgent specialist assistance and provide initial pre-hospital assistance in cases of physical and chemical injuries to the eye; K_K02 consider patient's well-being as a priority; K_K04 take action towards the patient based on ethical principles, while being aware of the social determinants and limitations resulting from the disease; K_K08 formulate opinions based on own assessment and observation; K_K11 accept the responsibility associated with decisions taken as part of professional activities, including self and other people's safety.		
	Family Medicine	Tutorials: H.U1 measure and assess basic vital functions (temperature, heart rate, blood pressure) and monitor them using a cardiomonitor and a pulse oximeter; H.U25 interview an adult, including an older adult, using skills regarding the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective; H.U26 interview a child and his/her caregivers, using skills regarding the content, process and perception of communication, taking into account the biomedical and patient perspectives; H.U28 perform a complete and focused physical examination of the adult tailored to the specific clinical situation; H.U29 conduct a complete and focused physical examination of the child from the neonatal period to adolescence, adapted to the specific clinical situation; H.U10 perform urinary bladder catheterization in a woman and a man; H.U14 perform a standard resting electrocardiogram and interpret its result; H.U33 confirm the patient's death;	Tutorials: - clinical tutorials - small group work: "case study" - small group work: PBL – Problem-Based Learning activities - case study - computer-assisted learning such as telemedicine, electronic health records	Practical test in a clinical setting (0 - 1 scoring system, recognition of the procedure performed if the measures taken are properly implemented). Extended observation (> 50%).

		H.U34 conduct check-up tests, including comparison of anthropometric and blood pressure measurements with data on percentile charts, and assess the degree of puberty; H.U35 qualify the patient for immunisation; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K05 identify and recognise own limitations and to self-assess educational deficits and needs; K_K06 promote health behaviours; K_K07 use objective sources of information; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences.		
	Selected specialty	In the syllabi of the selected specialty courses	In the syllabi of the selected specialty courses	In the syllabi of the selected specialty courses - a student has to obtain the total number of ECTS credits required to complete a given stage of study
Groups I – holiday work placement	Holiday work placement (4 weeks of patient care at a hospital ward)	The graduate knows and understands/is able to/is ready to: C.W17 principles of disinfection, sterilisation and aseptic management; DU.1 respects patients' rights, including: the right to confidentiality, the right to intimacy, the right to dignity, the right of access to health services, the right to die with dignity; D.U4 . demonstrate responsibility for improving their own skills and transferring knowledge to others; D.U11 adapt verbal communication to the needs of the patient, expressing themselves clearly and avoiding medical jargon; E.W25 carry out pressure ulcer prevention and knows the general principles of pressure ulcer treatment; E.W31 basic issues of prevention and the management of occupational exposure to hazardous and noxious agents;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		E.U14 perform medical procedures and treatments, including: 1. measuring and assessing basic vital functions (temperature, pulse, blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2. intravenous, intramuscular and subcutaneous drug administration; 3. collection and securing of blood for laboratory tests, including microbiological tests; 4. insertion of a gastric tube; 5. rectal infusion; E.U15 use personal protective equipment appropriate to the clinical situation; E.U18 maintain patient medical records, also in electronic form, in accordance with the law; K_K01 establish and maintain deep and respectful contact with the patient, as well as to show understanding for ideological and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and other patient rights; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.		
	Holiday work placement (<i>3-week work placement in open healthcare – family doctor)</i>	The graduate knows and understands/is able to/is ready to: G.W4 concept of public health, its aims, objectives, as well as the structure and organisation of the health system at national and global level and the impact of economic determinants on capacity; G.W12 basic regulations on the organisation and financing of the health service, universal health insurance and the principles of organisation of healthcare provider companies; D.W5 social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudice and discrimination; G.W6 legal regulations on medical confidentiality, civil and professional liability of the doctor, knows the principles	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		of storage and access to medical records including e-documentation and protection of personal data; E.W39 types of biological materials used in laboratory diagnostics and principles of collecting material for tests; D.W7 importance of verbal and non-verbal communication in communicating with patients and the concept of trust in patient interaction; F.W9 guidelines for cardiopulmonary resuscitation of neonates, children and adults; D.U1 observe ethical patterns in professional activities, including planning and conducting the therapeutic process in accordance with ethical values and the idea of humanism in medicine; D.U3 respect the rights of the patient; D.U10 ask open and closed questions, conducts internal and final summaries, is able to communicate and actively listens, use verbal and non-verbal techniques, encourages the interlocutor to speak; E.U1 conduct a medical interview with an adult patient under supervision; E.U12 recognise conditions requiring hospitalisation; E.U14 perform medical procedures and treatments (measurement of body temperature, pulse, blood pressure, standard resting electrocardiogram, pulse oximetry); E.U18 keep medical records, including electronic records in accordance with the applicable legislation F.U2 apply and change a sterile dressing; F.U3 provide care for a simple wound, applies and changes a sterile dressing on a surgical wound; F.U8 manage external bleeding; K_K02 consider well-being of the patient as a priority- has the ability to act under conditions of uncertainty and sometimes stress; K_K03 respect medical confidentiality and all patients' rights (e.g. the right to information, to intimacy, to an informed decision, to a dignified death); K_K05 recognise own limitations and perform self-assessment of deficits and educational needs ;		
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		K_K09 know how to cooperate with representatives of other professions in the field of health care.		
	Holiday work placement (4 weeks at the internal diseases clinic/ward))	The graduate knows and understands/is able to/is ready to: E.W7 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common internal medicine diseases in adults and their complications; E.W11 recognise the peculiarities in the clinical manifestations, diagnosis and therapy of the most common diseases occurring in older people; E.W12 recognise emergencies connected with hospitalisation of the elderly; E.W13 basic principles of organizing care for an older adult and the strain placed on the caregiver of an older adult; F.W9 recommendations for cardiopulmonary resuscitation of adults; G.W6 legal regulations concerning medical confidentiality, civil and professional liability of a physician, knows the principles of storing and making the following available: medical records including e-documentation and personal data protection; D.W7 importance of verbal and non-verbal communication in the process of communicating with patients and the concept of trust in interaction with a patient; D.U1 observe ethical patterns in professional activities, including planning and conducting the therapeutic process in accordance with ethical values and the idea of humanism in medicine; D.U3 respect the rights of the patient; D.U10 ask open and closed questions, conducts internal and final summaries, communicate and actively listen, use verbal and non-verbal techniques, encourages the interlocutor to speak; E.U1 take an interview with an adult patient, including an elderly patient, using skills related to content, process and perception of communication, taking into account the biomedical and patient perspective;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		E.U3 take an interview in a life and health emergency situation using the SAMPLE scheme; E.U12 recognise conditions requiring hospitalisation; E.U14 perform medical procedures and treatments (measurement of body temperature, pulse, blood pressure, standard resting electrocardiogram, pulse oximetry); E.U18 maintain medical records, including electronic records in accordance with current legislation; F.U4 recognise the most frequent life-threatening conditions, including with the use of various techniques; E.U9 recognise the most common symptoms of diseases in adults, apply diagnostic tests and interpret their results, perform differential diagnosis, implement therapy, monitor effects of treatment and assess indications for specialist consultations; E.U15 use personal protective equipment appropriate to the clinical situation; E.U16 determine the death of a patient; K_K02 consider patient's well-being of the patient, has the ability to act under conditions of uncertainty and sometimes stress; K_K03 respect medical confidentiality and all patients' rights (e.g. the right to information, to intimacy, to an informed decision, to a dignified death); K_K05 recognise own limitations and performs self-assessment of deficits and educational needs; K_K09 can cooperate with representatives of other professions in the field of health protection; K_K08 formulate appropriate conclusions from own measurements or observations.		
	Holiday work placement (1 week in the emergency care)	The graduate knows and understands/is able to/is ready to: D.W2 concepts of health and illness, the influence of the social environment (family, work, social relations) and socio-cultural conditions (origin, social status, religion, nationality and ethnic group) on the patient's state of health;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		D.W5 social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudices and discrimination; D.W7 characteristics and role of verbal (conscious construction of messages) and non-verbal communication (e.g. facial expressions, gestures, management of silence and space); E.W39 types of biological materials used in laboratory diagnosis and the principles of collecting material for testing; F.W9 describe the guidelines for cardiopulmonary resuscitation of newborns, children and adults; F.W12 principles of functioning of the integrated system of National Medical Service; G.W4 notion and functions of public health, the notion, tasks and methods of health promotion, the notion of quality in health care and factors influencing it, the structure and organisation of the health care system at the national and world level, G.W12 legal regulations concerning medical confidentiality, criminal, civil and professional liability of a physician, the principles of keeping, storing and making available medical documentation, including e-documentation, and personal data protection;. D.U1 observe ethical patterns in professional actions, including planning and conducting the therapeutic process in accordance with ethical values and the idea of humanism in medicine; D.U3 respect the rights of the patient; D.U10 ask open and closed questions, is able to signal and, actively listen, use verbal and non-verbal techniques, encourages the interviewee to speak: E.U1 conduct a medical interview with an adult patient under supervision; E.U12 recognise conditions requiring hospitalisation; E.U14 perform medical procedures and treatments (measurement of body temperature, pulse, blood pressure, standard resting electrocardiogram, pulse oximetry);		
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		E.U18 keep medical records, including electronic records in accordance with the applicable legal regulations; F.U1 wash his/her hands, put on sterile gloves, dress for a procedure requiring sterility; F.U4 recognise the most common life-threatening conditions, including using various techniques; F.U2 apply and change a sterile dressing; F.U3 assess and dress a simple wound, including local anaesthesia (superficial, intrathecal), insert and remove surgical sutures, insert and change a sterile surgical dressing; F.U8 dress external bleeding; K_K02 consider patient's well-being as a priority, has the ability to act under conditions of uncertainty and sometimes stress K_K03 respect medical confidentiality and all patients' rights (e.g. the right to information, to intimacy, to an informed decision, to a dignified death); K_K05 recognises own limitations and performs self-assessment of deficits and educational needs; K_K09 - cooperate with representatives of other professions in the field of health protection.		
	Holiday work placement (2 weeks at the surgery ward, including at least 2 patient rounds during 2 weeks of placement)	The graduate knows and understands/is able to/is ready to: F.W1 causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases requiring surgical intervention in acute and chronic abdominal diseases, organ injuries and bone fractures; F.W3 principles of qualification of patients for surgical procedures, know the principles of performance and the most common complications of basic surgical procedures and invasive diagnostic and therapeutic procedures; F.W6 principles of patient management in the post-operative period - monitoring the patient's condition, analgesic treatment; F.W5 principles of perioperative safety, preparing the patient for surgery, administering general and local anaesthesia and controlled sedation;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		D.U3 respects patients' rights, including: the right to confidentiality, the right to intimacy, the right to dignity, the right of access to health services, the right to a dignified death; E.U14 perform medical procedures and treatments, including: 1. measuring and assessing basic vital functions (temperature, pulse, blood pressure) and monitoring them using a cardiomonitor and pulse oximeter; 2. intravenous, intramuscular and subcutaneous drug administration; F.U1 is willing to assist in a typical surgical procedure, is able to prepare the surgical field; is able to apply the principles of aseptics and antisepsis; F.U3 use basic surgical instruments; is able to dress a simple wound, to apply and change a sterile surgical dressing; F.U4 recognise the most common life-threatening conditions, including using various imaging techniques; F.U5 recognise on the basis of radiological examination the most common types of fractures, especially of long bones; F.U6 immobilise limbs ad hoc, choose the type of immobilisation in typical clinical situations and control the correct blood supply to the limb after immobilisation dressing placement; F.U8 external bleeding; F.U12 perform advanced life support (ALS) in adults according to ERC guidelines; K_K01 establish and maintain a deep and respectful contact with a patient, as well as to show understanding for world-view and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 respect medical confidentiality and patient's rights; K_K09 implement the principles of professional collegueship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.	
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	Holiday work placement (2 weeks at the paediatrics ward, including at least 2 patient rounds during 2 weeks of placement)	The graduate knows and understands/is able to/is ready to: E.W1 principles of natural feeding, feeding a healthy child and prevention of obesity and nutritional modifications due to disease; E.W2 principles of prevention of childhood illnesses, including screening, balance testing and immunisation; E.W3 environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: 1. rickets, tetany, water-electrolyte and acid-base disorders; 2. heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, cardiac arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope; 3. respiratory diseases and allergies, including congenital respiratory defects, bronchial dilatation, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema; 4. anaemia, haemorrhagic diathesis, bone marrow failure conditions, childhood malignancies including solid tumours typical of childhood, primary and secondary immunodeficiencies; 5. acute and chronic abdominal pain, vomiting, diarrhoea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel disease, pancreatic disease, cholestasis, liver disease, food allergies, congenital abnormalities of the gastrointestinal tract; 6. acute kidney injury, chronic kidney disease, urinary tract infections, urinary tract disorders, congenital defects of the urinary tract, vesicoureteral reflux disease, kidney stones, glomerular diseases, tubulointerstitial diseases (tubulopathies, tubular acidosis), genetically determined kidney diseases, renal hypertension; E.W4 issues of the abused and sexually abused child and principles of intervention with such patients;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)
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		E.W5 issues of mental retardation, behavioural disorders, psychoses, addictions, autism spectrum disorders, eating and excretion disorders in children; E.W39 types of biological materials used in laboratory diagnostics and the principles of collecting material for tests; E.U2 collect an interview with a child and their carers, using skills on content, process and perception of communication, taking into account the biomedical and patient perspectives; E.U6 carry out a complete and focused general paediatric physical examination of the child from the neonatal to adolescent period adapted to the specific clinical situation. E.U8 carry out balance examinations, including collating anthropometric and blood pressure measurements with data on centile grids and assessing the stage of puberty E.U10 recognise the most common symptoms of disease in children, apply diagnostic tests and interpret their results, carry out differential diagnosis, implement therapy, monitor treatment effects and assess indications for specialist consultation, particularly for symptoms such as: 1. fever; 2. cough and expectoration; 3. dyspnoea 4. nasal and ear discharge; 5. urinary disturbances; 6. rash; 7. growth disorders; 8. palpitations 9. fainting; 10. abdominal pain; 11. constipation and diarrhoea; 12. dehydration; 13. jaundice; E.U12 recognise conditions requiring treatment in a hospital setting; E.U14 perform medical procedures and treatments, including: 1. measuring and assessing basic vital functions (temperature, pulse, blood pressure) and monitoring them using a cardiomonitor and pulse oximeter;	
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		2. various forms of inhalation therapy, and make the choice of inhaler for the patient's clinical condition; 3. oxygen therapy using non-invasive methods; 4. intravenous, intramuscular and subcutaneous drug administration; 5. collection and securing of blood for laboratory tests, including microbiology; 6. standard resting electrocardiogram, and interpret the result; 7. strip testing, including glucose measurement using a glucometer; E.U18 maintain the patient's medical records, including in electronic form, in accordance with the law; E.U29 identify possible indicators of violence, including domestic violence, take an interview to verify if there is a risk that the patient is experiencing violence, make a note in the medical record and initiate the 'Blue Card' (<i>Niebieska Karta</i>) procedure; K_K02 consider patient's well-being as a priority; K_K03 respect medical confidentiality and patients' rights ; K_K05 perceive and recognise own limitations and perform self-assessment of deficits and educational needs; K_K09 cooperate with representatives of other professions in the field of health care; K_K08 formulate appropriate conclusions from own measurements or observations.		
	Holiday work placement (2 weeks at the gynaecology and obstetrics ward, including at least 2 patient rounds during 2 weeks of placement)	The graduate knows and understands/is able to/is ready to: F.W4 principles of eligibility for basic surgical and invasive diagnostic and therapeutic procedures and the most common complications F.W15 female reproductive functions, the disorders associated with them and the diagnostic and therapeutic management of 1) the menstrual cycle and its disorders; 2) pregnancy; 3) physiological childbirth, pathological childbirth and puerperium; 4) inflammation and tumours of the genital tract;	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		5) birth regulation and assisted reproduction; 6) menopause; 7) basic gynaecological diagnostics and procedures; F.W3 basic classical and minimally invasive surgical techniques; F.W7 principles of postoperative treatment with analgesic therapy and postoperative monitoring; C.W17 principles of disinfection, sterilisation and aseptic management; D.U3 respect the rights of the patient, including: the right to confidentiality, the right to intimacy, the right to dignity, the right to access health services, the right to die with dignity; E.U5 perform a complete and focused physical examination of an adult including gynaecological; E.U18 maintain the patient's medical records, including in electronic form, in accordance with the law; E.U22 administer rational antibiotic therapy depending on the patient's clinical condition; F.U1 wash his/her hands surgically, to put on sterile gloves, to dress for an operation or a procedure requiring asepsis, to prepare the operating field according to the principles of asepsis and to participate in an operation; F.U13 apply correct medical management of physiological pregnancy and puerperium according to standards of perinatal care; F.U14 recognise the most common symptoms indicating abnormal course of pregnancy and puerperium, apply and interpret diagnostic tests, perform differential diagnostics, implement therapy, monitor effects of treatment (abdominal pain, uterine contractions, bleeding from the reproductive tract, abnormal heart rate and foetus movement, arterial hypertension); F.U15 perform detection and interpretation of foetal heart function; F.U16 recognise incipient labour and signs of abnormal labour; F.U17 assist in a physiological birth;		
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		F.U18 apply the correct medical management of abnormal genital tract bleeding, absence of menstruation, pelvic pain (pelvic inflammatory disease, ectopic pregnancy), vaginitis and vulvodynia, sexually transmitted diseases; F.U22 obtain information from team members respecting their diverse opinions and specialist competencies and incorporate this information into the patient's diagnostic and therapeutic plan and apply ATMIST, RSVP/ISBAR protocols; E.U18 maintain the patient's medical records, including in electronic form, in accordance with legal regulations; K_K01 establish and maintain a deep and respectful contact with a patient, as well as show understanding for world-view and cultural differences; K_K02 consider patient's well-being as a priority; K_K03 observe medical confidentiality and respect patients' rights; K_K09 - comply with the rules of collegueship and appropriate rules of cooperation in a team, including with representatives of other medical professions, also in a multicultural environment.		
	Holiday work placement (2 weeks at the intensive care unit, including at least 2 patient rounds during 2 weeks of placement)	The graduate knows and understands/is able to/is ready to: F.W6 principles of perioperative safety, preparing the patient for surgery, administering general and local anaesthesia and controlled sedation; F.W7 postoperative treatment with analgesic therapy and postoperative monitoring; F.W8 indications and principles of intensive care; F.W9 current guidelines for cardiopulmonary resuscitation of newborns, children and adults; F.W14 principles of management of long-duration central venous catheters; F.W23 principles of suspicion and diagnosis of brain death; F.U11 perform basic BLS resuscitation procedures in adults, including using an	Holiday work placement	Observation of attitudes and work on tasks given to the student by the work placement supervisor (work placement logbook)

		automated external defibrillator, in accordance with ERC guidelines; F.U12 perform advanced life support (ALS) resuscitation in adults according to ERC guidelines; E.U18 keep medical records of a patient, including in electronic form, in accordance with legal regulations; K_K02 consider patient's well-being as a priority; K_K03 respect medical confidentiality and all patients' rights; K_K05 perceive his/her own limitations and carry out self-evaluation of deficits and needs; K_K09 cooperate with representatives of other professions in the field of health protection.		
Elective groups of courses, e.g., university-wide courses or courses included in another field of study that are unrelated to a specific field of study	Elective Courses – sem. I (I year)	In the syllabi of the course selection	In the syllabi of the course selection, in University's offer	In the syllabi of the course selection – the student must obtain the total number of ECTS credits required to complete a given stage of study
	Elective Courses – sem. II (I year)			
	Elective Courses – sem. III (II year)			
	Elective Courses – sem. IV (II year)			
	Elective Courses – sem. V i VI (III year)			
	Elective Courses – sem. VII i VIII (IV year)			
	Elective Courses – sem. IX i X (V year)			
Physical Education	Physical Education 1	The graduate knows and understands/is able to/is ready to: D.W3 human behaviour conducive to maintaining health and the principles of motivating the patient to pro-health behaviour (Prochaska and DiClemente model of change, motivational interviewing); D.U11 adapt the way of verbal communication to the patient's needs, express oneself in an understandable way and avoiding medical jargon; E.U21 provide health education to the patient; E.U28 identify social determinants of health;	Tutorials: - Visual methods: demonstration with explanation, film, slides - Verbal methods: description, explanation, clarification - Movement teaching methods: analytical, synthetic and global - Methods of teaching technique in sports games: repetition - Methods used in the formation of motor skills: repetition, small and medium loads, circuit, circuit-stationary. Forms of exercise: team, frontal, individual	Tutorials: Technically correct performance of a physical exercise developed in class (scoring 0-1) Oral test (> 75%) Extended observation (> 50%)

		G.W4. concept and functions of public health, the notion, tasks and methods of health promotion; K_K01 establish and maintain a deep and respectful contact with a patient, as well as show understanding for world-view and cultural differences; K_K06 promote health behaviours;		
	Physical Education 2	The graduate knows and understands/is able to/is ready to: D.W3 human behaviour conducive to maintaining health and the principles of motivating the patient to pro-health behaviour (Prochaska and DiClemente model of change, motivational interviewing); D.U11 adapt the way of verbal communication to the patient's needs, expressing oneself in an understandable way and avoiding medical jargon; E.U21 provide health education to the patient; E.U28 identify social determinants of health; G.W4. know the concept and functions of public health, the notion, tasks and methods of health promotion; K_K01 establish and maintain a deep and respectful contact with a patient, as well as show understanding for world-view and cultural differences; K_K06 promote health behaviours.	Tutorials : - Visual methods: demonstration with explanation, film, slides. - Verbal methods: description, explanation, clarification. - Movement teaching methods: analytical, synthetic and global. - Methods of teaching technique in sports games: repetition. - Methods used in the formation of motor skills: repetition, small and medium loads, circuit, circuit-stationary. Forms of exercise: team, frontal, individual	Exercises: Technically correct performance of a physical exercise developed in class (Scoring 0-1) Oral test (> 75%) Extended observation (> 50%)
Foreign Language	...			
Work Placements Introductory courses	Occupational Health and Safety and Ergonomics	The graduate: - describes the basic principles of ergonomics and the necessary health and safety regulations; - explains his/her rights and responsibilities in this regard; - defines and recognises common hazards potentially occurring at NCU; - is able to describe accident and evacuation procedures; - adheres to the rules and standards applicable to a chemist; understands and appreciates the importance of caring for	discussion, classic method problem	Final written credit – e-learning test on Moodle platform (≥60%):

		health and the environment in his/her own actions and those of others.		
	Training on Student Rights and Obligations	The graduate: - lists and characterises the basis of legal acts in force at the University; - has the ability to move around and function in the University; - adapts to the rules of the University	conversational lecture	Final written credit - test
	Cooperation with the Medical Library	The graduate: - knows the structure of a library; - knows how to use the library collection catalogue system; - respects the library resources of the University.	informative lecture	Final written credit - test
Diploma project and/ or diploma examination Final examination	-		-	Objective Structured Clinical Examination
Work placements				
Duration of Work placements	600 hours (20 ECTS)			
Form of Work placements	Tutorials Holiday Work Placement in Patient Care – place: health care units – hospital wards Work Placement in Open Health Care – place: health care units – family doctor practice Work Placement in Internal Diseases – place: health care units – internal diseases clinic or ward Work Placement in Surgery - place: health care units – surgery clinic or ward Work Placement in Paediatrics – place: health care units – paediatric clinic or ward Work Placement in Emergency Care - place: health care units – anaesthesiology and intensive care clinic or ward Work Placement in Obstetrics and Gynaecology - place: health care units – obstetrics and gynaecology clinic or ward			
Rules of Work placements	Included in work placement regulations, syllabi and work placement logbooks			
Detailed allocation of ECTS credits				
Academic or artistic disciplines, to which learning outcomes refer:				
	Artistic or academic discipline		ECTS credits	
			number	%
1.	medical sciences		360	100

Groups of courses	Course	No of ECTS credits	No of ECTS credits in the discipline:	No of ECTS credits for elective courses	No of ECTS credits obtained by the student in classes within contact hours with the teacher or tutor	No of ECTS credits obtained by the student as a result of: courses related to academic activity within a discipline or disciplines, to which the field of study is assigned courses focused on training practical skills
			Medical Science			
Course group I Morphological Sciences (group A)	Anatomy (1/2)	7	7		4,8	7
	Anatomy (2/2)	8	8		4,4	8
	Histology	5	5		2,8	5
	Embriology	1,5	1,5		0,88	1,5
Course group II Basic Sciences in Medicine (group B)	General Chemistry	1,5	1,5		0,88	1,5
	Biochemistry (1/2)	4,5	4,5		2,28	4,5
	Biochemistry (2/2)	5,5	5,5		3,16	5,5
	Biophysics	3	3		1,88	3
	Cell Biology and Cytophysiology	3,5	3,5		1,8	3,5
	Molecular Biology	3,5	3,5		1,76	3,5
	Physiology with Elements of Clinical Physiology (1/2)	5	5		2,88	5
	Physiology with Elements of Clinical Physiology (2/2)	7	7		3,68	7
	Scientific Research Methodology	1,5	1,5		1	1,5
	Biostatistics	0,5	0,5		0,37	0,5
	Alternative Preclinical Models with Computer Analysis	1,5	1,5		0,76	1,5

Course group III Preclinical Sciences (group C)	Immunology	3	3		1,52	3
	Basics of Medical Genetics	3	3		1,6	3
	Parasitology	2	2		1,48	2
	Pathophysiology	6	6		3,2	6
	Mikrobiology	4	4		2,24	4
	Pathomorphology	13	13		6,88	13
	Pharmacology and Toxicology	8	8		6,08	8
	Gene Therapy	1,5	1,5		1,06	1,5
	Cancer Genetics with Elements of Genetic Diagnostics	2	2		1,4	2
	Regenerative Medicine	1	1		0,7	1
Behavioural and Social Sciences with Elements of Professionalism and Communication, Including the Idea of Humanism in Medicine (group D).	Medical Psychology with Elements of Interpersonal Communication	1	1		0,73	1
	Medical Polish - I year sem. II	2	2		1,33	2
	Medical Polish – II year sem. III	2,5	2,5		1,33	2,5
	Medical Polish - II year sem. IV	3,5	3,5		1,33	3,5
	Communication in Medicine II year	2	2		1,24	2
	Communication in Medicine III year	2	2		1,24	2
	Medical Ethics	1	1		0,64	1
	Medical Sociology with Elements of Professionalism	1	1		0,64	1
	History of Medicine with Elements of Philosophy	1,5	1,5		0,9	1,5
	Medical Psychology with Elements of Crisis Intervention	1	1		0,68	1
	Effective Learning and Effective Learning Techniques	1	1		0,68	1
Non-Surgical Clinical Sciences (group E)	Introduction to Internal Diseases	5,5	5,5		2,88	5,5
	Introduction to Paediatrics	4,5	4,5		2,5	4,5
	Laboratory Medicine	2,5	2,5		1,64	2,5
	Clinical Genetics and Prenatal Genetics	1,5	1,5		1	1,5
	Clinical Pharmacology	1,5	1,5		1,04	1,5
	Cardiology	4,5	4,5		2,44	4,5
	Nephrology	3	3		1,63	3
	Endocrinology and Diabetology	3,5	3,5		2,07	3,5
	Allergology with Clinical Immunology	2,5	2,5		1,58	2,5
	Gastroenterology	2,5	2,5		1,75	2,5

	Haeamtolgy	3	3		1,88	3
	Rheumatology	2,5	2,5		1,68	2,5
	Dermatology and Venereology	6	6		3,28	6
	Pulmonology with Elements of Pulmonary Oncology	3	3		1,72	3
	Paediatrics	7,5	7,5		5,21	7,5
	Neonatology	1,5	1,5		1	1,5
	Neurology	4	4		2,07	4
	Psychiatry	5	5		3,68	5
	Infectious Diseases	3	3		2,44	3
	Geriatrics	1,5	1,5		0,88	1,5
	Rehabilitation	2,5	2,5		1,6	2,5
	Palliative Medicine	2,5	2,5		1,7	2,5
	Clinical Oncology	3	3		1,83	3
	Family Medicine	4	4		2,96	4
Surgical Clinical Sciences (group F)	Laboratory Medicine	6	6		3,52	6
	Vascular Surgery	2	2		1,23	2
	Thoracic Surgery	2	2		1,24	2
	General and Endocrine Surgery	4	4		2,44	4
	Surgical Oncology	1,5	1,5		1,13	1,5
	Transplantology	1,5	1,5		1,03	1,5
	Ortopaedics and Traumatology	3	3		1,76	3
	Nuclear Medicine	0,5	0,5		0,48	0,5
	Introduction to Surgery	4,5	4,5		2,38	4,5
	Cardiac Surgery	1,5	1,5		1,24	1,5
	Gynaecology and Obstetrics	8,5	8,5		5,76	8,5
	Neurosurgery with Elements of Neurooncology	3	3		2,08	3
	Urology and Andrology	3	3		2,07	3
	Paediatric Surgery	2,5	2,5		1,5	2,5
	Otolaryngology	3	3		2,08	3
	Ophthalmology	3	3		2,08	3
	Plastic Surgery	1,5	1,5		1,07	1,5
	Anaesthesiology and Intensive Care	3	3		2,13	3
	Emergency Medicine	2,5	2,5		1,64	2,5
	Introduction to Dentistry	0,5	0,5		0,37	0,5
	First Aid	1,5	1,5		0,83	1,5
	Techniques of Medical Procedures	1	1		0,57	1
Legal and Organisational Aspects of Medicine (group G)	Hygiene and Epidemiology	1,5	1,5		1,2	1,5

	Public Health	1	1		0,6	1
	Medical Law	1,5	1,5		0,92	1,5
	Preparation for Final Medical Examination - LEK (Public Health)	0,5	0,5		0,37	0,5
	Forensic Medicine with Elements of Law	3	3		2,46	3
Practical Clinical Clerkship in the 6th year (group H)	Internal Diseases	16	16		9,68	16
	Paediatrics	8	8		4,88	8
	Surgery	8	8		4,88	8
	Gynaecology and Obstetrics	4	4		4	4
	Psychiatry	4	4		4	4
	Emergency Medicine	4	4		4	4
	Family Medicine	4	4		2,44	4
	Selected Specialty	12	12		12	12
Work Placements (group I)	Work placement in patient care	4	4		4	
	Work placement in open healthcare	3	3		3	
	Work placement in internal diseases	4	4		4	
	Work placement in surgery	2	2		2	
	Work placement in paediatrics	2	2		2	
	Work placement in emergency care	1	1		1	
	Work placement in anaesthesiology and intensive care	2	2		2	
	Work placement in gynaecology and obstetrics	2	2		2	
Physical Education	Physical Education1	0				
	Physical Education2	0				
Elective Groups of courses, e.g., university-wide courses or courses included in another field of study that are unrelated to a specific field of study	Elective Courses – semester I	2	2	2		
	Elective Courses – semester II	2	2	2		
	Elective Courses – semester III	2	2	2		
	Elective Courses – semester IV	2	2	2		
	Elective Courses – semester V/VI	2	2	2		
	Elective Courses semester VII/VIII	1	1	1		
	Elective Courses semester IX/X	1	1	1		
Work placements Introductory courses	Occupational Health and Safety and Ergonomics	0	0			
	Training on Student Rights and Obligations	0	0			

	Cooperation with the Medical Library	0	0			
Foreign language						
Diploma project and/or diploma examinationf		-				
TOTAL:		360 100 %	360 100%	12 3,3%	230,75 64,1%	328 91,1%

Course modules	Course	Course content
Course module A Morphological Sciences	Normal anatomy	The course Normal Anatomy in the first year of studies is intended to provide students with knowledge of the structure and function of the human body. This constitutes the basis for further study of other general and clinical subjects. The knowledge acquired by the students will be necessary, among other things, to interpret and evaluate differences between normal and pathological macroscopic images.
	Histology	Histology is the study of the structure, development and function of tissues, organs and systems. It allows to learn about the microscopic structure and functions of individual types of tissues and organs in relation to their activities. Understanding and improving the principles of proper microscopic observation and correct interpretation of the image from under the microscope is also the basis for expanding knowledge in other subjects, e.g. pathomorphology or physiology.
	Embryology	Embryology is the branch of biology that studies the prenatal development of gametes, fertilization, and development of embryos and fetuses. It provides a foundation for an understanding of the form and relationships of cells, tissues and organs in defined regions of the body. Knowledge of Embryology is a fundamental requirement for the acquisition of clinical skills and interpretation of diagnostic imaging. The course is intended to aid students in understanding knowledge on the critical stages of normal development of humans but also the effects of teratogens, genetic mutations and environmental factors on it. In achieving this objective, students will be prepared for better understanding of some primary and clinical courses, e.g. Genetics, Pediatrics.
Course module B Foundations of Medicine	General chemistry	The aim of teaching is to deepen the knowledge of chemical processes taking place in the surrounding world. Understanding the importance of chemistry in biological and medical sciences to the extent necessary for further medical studies.
	Biochemia	The aim of teaching the subject is to prepare students to study clinical subjects as well as to work in a future profession. The provided content allows to learn about the structure of the most important biomolecules (proteins, vitamins), their physiological functions, as well as the influence of pathological modifications of these molecules on the course of human metabolism. Knowledge of the structure of enzymes, their operation and regulation methods is necessary to understand metabolic changes in physiological and pathological states. The next goals of teaching the subject are to learn about the course of the basic metabolic pathways, as well as the ways of their regulation and the specificity of biochemical changes in the main tissues and systems of the human body, as well as to understand the role of disorders of these processes in the development of basic metabolic diseases with an environmental and genetic background.
	Biophysics	The aim of the course is to familiarize students with the fundamental rights and physical and biophysical phenomena and develop intuition and a critical look at the results of the measurements.

	Cell biology and cytophysiology	The subject of Cell biology and cytophysiology is to familiarize the student with the basic living unit of the organism. The program of lectures and tutorials covers issues presenting the cell as a perfectly integrated unit of structure and function, and will familiarize Students with the basic techniques used in research at the cellular level.
	Molecular biology	Molecular Biology classes are scheduled for the first semester, encompassing 20 hours of lectures and 20 hours of tutorials. The primary objective is to equip students with the foundational knowledge necessary to engage with clinical subjects. Understanding the molecular underpinnings of human physiology is imperative for their daily professional practice.
	Human physiology with the elements of clinical physiology	The human physiology course enables the Student to learn the basic concepts and understand the regulatory processes of individual organs and systems. It also allows us to understand the relationships between individual elements of the human body.
	Research methodology	Elementary knowledge of designing and conducting research, in particular research problems, methods, techniques and research tools.
	Biostatistics	The aim of the course is to teach Student statistical analysis together with statistical inference and graphical presentation of data.
	Alternative Preclinical Models with Computational Analysis	The course "Alternative Preclinical Models with Computer Analysis" introduces students to the fundamentals of cell culture within the context of healthcare. It explores how human cells can be grown in lab settings to mimic diseases, particularly focusing on cancer research. Additionally, students learn to analyze how cells react to different conditions, such as the presence of various substances in their environment. The course also covers the use of clinical and preclinical databases, providing students with the skills to create and analyze their own datasets using relevant tools.
Course module C Preclinical Sciences	Immunology	The subject is conducted in the form of lectures, seminars and laboratory tutorials. The subject includes: introduction to immunology, characterization of innate and adaptive immune responses as well as the most important aspects of immunity in medicine and biology. Students learn the proper functioning of defense mechanisms, as well as selected issues of immunopathology. They acquire knowledge about the use of knowledge of defense mechanisms in medicine (e.g. immunodiagnostics, transplantology) and in scientific research.
	Basic of medical genetics	During classes, students learn the basics of the mechanisms of human genetic diseases (including cancer) and congenital malformations, commonly present in the population. The lectures and tutorials present the genetic syndromes and diseases, as well as diagnostic methods (cytogenetic and molecular) used in clinical genetics.
	Parasitology	The general objectives of the course are to teach students biology of human parasites, pathogenesis of parasitic diseases and diagnostic methods in parasitology. The main aim of the course is to make the students ready to learn clinical subjects as well as to prophylaxis, diagnostics and therapeutics of parasitic diseases.
	Pathophysiology	Pathophysiology describes etiology and origins of mechanisms for functional disorders within an organism in various pathological stages. It covers pathophysiology of organs and systems, issues in relation to changes in adaptation functions of organism, disorders of organism's regulatory functions, metabolic disorders and pathophysiology of cancer.
	Microbiology	This course introduces students to the human physiological microbiota; local, organ, and systemic infections; their etiology, epidemiology, pathomechanisms; and microbiological diagnostics. Students learn about the most common human pathogens, their morphology, properties, pathogenicity, identification methods, antimicrobial susceptibility testing, mechanisms of antimicrobial resistance, asepsis and antisepsis principles, and laboratory work standards in microbiology.

	Pathomorphology	The purpose of the Pathology course is studying and understanding etiology, pathogenesis, morphology and functional changes of diseases. Topics of the lectures focus on general pathology, seminars and microscopic tutorials aim at extending knowledge and discussing the lecture associated withpics, and laboratory tutorials focus on preparing and processing histopathological slides as well as additional pathology techniques, immunohistochemistry and molecular pathology techniques used in a laboratory.
	Pharmacology and toxcology	The subject "Pharmacology and toxicology" deals with the therapeutic effect of drugs, the indication for its use, possible side effects and contraindications to the use of particular groups of drugs, toxicological aspects. During the classes, individual groups of drugs are discussed, taking into account the above-mentioned aspects.
	Tumor genetics with elements of genetics diagnostics	The subject Cancer genetics with elements of genetic diagnostics aims to teach achievements in the field of genetic processes leading to the development of malignant and hereditary human tumors, with particular emphasis on advanced knowledge in the field of laboratory oncogenetics. The acquired knowledge and skills will allow you to assess the diagnostic value of genetic tests in oncology and their usefulness in the diagnostic and therapeutic process.
	Gene therapy	The subject Gene therapy is designed to present basic information on gene therapy and gene immunotherapy for solving problems of a practical nature, in particular attempts to treat cancer using gene therapy (TG) and gene immunotherapy. The theoretical basis presented in the lectures includes definitions, strategies, techniques and tools of TG, as well as examples of treated diseases and clinical trials. The practical tutorials are designed to familiarize students with basic laboratory techniques used in gene therapy, particularly the principles of vector construction, transfection of target cells and evaluation of the efficiency of procedures in transfecting cell lines, as well as attempts to program cells of the immune system.
Course module D Behavioral and Social Sciences	Medical Psychology with Elements of Interpersonal Communication	The course equips students with basic knowledge, skills, and competences for building and maintaining social contact.
	Medical polish for foreign students	The subject of Polish as a foreign language aims to introduce vocabulary related to the student's everyday life. The appropriate choice of vocabulary is to help the student to function in the reality surrounding him. The vocabulary is related to the student's everyday life and relates to shopping, eating, entertainment, way of spending free time, services and health.
	Medical Communication – Year II	The aim is to provide knowledge about medical communication and history-taking (with detailed discussion of the biomedical part) and practical skills. It shapes and strengthens a patient-centered attitude. It teaches effective information transfer, including obtaining informed consent and engaging patients in shared decision-making. Practical application of communication skills in simulated clinical scenarios.
	Medical Communication – Year III	As above, with additional focus on applying communication skills, engaging patients in decisions, resolving conflict situations from organizational causes and patient types, awareness of communication barriers; communication rules in medical practice with pediatric, geriatric, disabled patients, patients in end-of-life situations, their families, and within the medical team.
	Medical Ethics	Medical ethics is the result of the development of deontological thought. At the heart of medical practice are many moral issues that the physician will need to resolve. The Code of Medical Ethics is helpful in this regard.
	Sociology of Medicine	The aim of the classes is to familiarize students with the social causes and consequences of disease and disability. The student learns about the psychosocial problems of the patient and his social environment. The aim of the classes is to prepare the student to take social factors into account in everyday medical practice.
	History of Medicine with Elements of Philosophy	Main aim: to acquaint students with basic philosophical knowledge, especially philosophy of science and philosophy of medicine; students learn key philosophical ideas and systems.

	Medical Psychology with Elements of Crisis Intervention	Equips students with basic knowledge, skills, and social competences in medical psychology, including health behaviors, coping with stress, and issues related to crisis intervention.
	Effective Learning and Techniques of Efficient Studying	Aims to increase students' self-awareness and competences in more effective learning.
Course module E non-surgical clinical sciences	Introduction to Internal Diseases	The course aims to prepare the students for clinical courses in internal diseases and to bridge basic sciences with clinical disciplines. During the course students are familiarized with the process of clinical decision making. In details, student are taught: how to properly take medical history, how to appropriately examine a patient, when to implement a particular diagnostic test as well as how to critically appraise its value in order to establish a correct diagnosis. A comprehensive overview of signs and symptoms of various cardiovascular, respiratory, gastrointestinal, urogenital, and haematological disorders is given to students during lectures, seminars and tutorials. Seminars are planned to provide the students with the basics of physical examination. The lectures cover symptoms and differential diagnosis of the discussed conditions. Tutorials include practical classes at the patients' bedside. Students apply their theoretical knowledge on history taking and physical examination gained at lectures and seminars during practical classes with patients. Students obtain practical knowledge on sign and symptoms, as well as interpretation of diagnostic tests. Students assist to diagnostic and therapeutic procedures. Students, as observers, participate in clinical decision making. During the course, the basics of proper medical documentation keeping is presented as well.
	Laboratory medicine	Principles of laboratory diagnosis of the most common diseases in adults and children. Laboratory diagnosis of : disturbances of lipid metabolism, diabetes mellitus, thyroid disorders, liver disorders (assessment of enzymes activity, plasma proteins, acute phase proteins, viral infections), tumour markers, acute coronary syndromes, heart failure, kidney function.
	Introduction to Pediatrics	The aim of the subject "Introduction to paediatrics" is to help students become familiar with pediatric issues, including physiological and pathological basis of child development and current prophylactic strategies. During lectures and tutorials students will acquire knowledge how to take medical history and perform medical examination of a child of every age.
	Dermatology and venerology	Dermatology with venereology is one of the basic specialties. Dermatology deals with the diagnosis and treatment of skin lesions and its appendages (hair, nails) as well as some systemic diseases manifesting primarily on the skin. Venereology is a field of medicine dealing with diagnosis and treatment of sexually transmitted diseases.
	Rehabilitation	Rehabilitation is a field that deals comprehensively with improving the quality of life and functioning of a person with disorders resulting from a past or ongoing disease. During the Rehabilitation classes, issues related to the rehabilitation of patients with various types of dysfunctions of the musculoskeletal system and the nervous system will be presented in a condensed manner. The aim of the classes is to have knowledge about the role and methods used in rehabilitation
	Allergology and Clinical Immunology	The course includes learning how to recognize and treat allergies and diseases related to immune system disorders, including allergic diseases. The knowledge and skills gained during the implementation of this subject will be useful in understanding the essence of many diseases in the fields of dermatology, otolaryngology, pulmonology, ophthalmology and internal medicine. The acquired knowledge will allow for a comprehensive approach to the patient's health problems related to the impaired functioning of the immune system and its more effective treatment.

		In order to complete the course, it is necessary to have a good command of the diagnostics of internal diseases and the basics of immunology.
	Haematology	Developing professional skills related to hematology using knowledge acquired during lectures and exercises - the most common hematological diseases (cancer and non-cancer), life-threatening conditions in hematology, diagnosis of diseases in the field of primary health care
	Neurology	Aims to review and expand issues in anatomy and physiology of the nervous system and to introduce symptoms of structural and functional disorders underlying neurological diseases. The clinical part focuses on neurological examination skills, diagnostics, and treatment.
	Rheumatology	The subject of rheumatology is intended to prepare the student in the basics of diagnosis and treatment of rheumatic diseases, taking into account the latest diagnostic techniques in systemic connective tissue diseases, systemic vasculitis, seronegative spondyloarthropathies, crystallopathies, soft tissue rheumatism, degenerative disease and osteoporosis.
	Cardiology	The subject "Cardiology" is aimed at learning how to recognize, diagnose and treat basic diseases of the cardiovascular system and how to respond to life-threatening conditions resulting from these diseases.
	Paediatrics	The subject of the course deals with selected issues of developmental age and aims to familiarize with the most common diseases in the field of allergology, gastroenterology, haematology and paediatric oncology, nephrology, pulmonary diseases, immunology, cardiology, paediatric neurology and endocrinology and basic knowledge of metabolic diseases. During the classes, students improve the skills of recognising, diagnosing and treatment of childhood diseases, and the skills of communication with the paediatric patient and its parents.
	Endocrinology and Diabetology	The aim of the course is to provide students with the knowledge about clinical symptoms, diagnosis and current treatment of endocrine diseases.
	Pulmonology with Elements of Pulmonary Oncology	During the course students acquaint with general symptomatology of lung diseases. analyse diseases entity; detail symptomatology, differentiation and treatment. The students also acquaint with education in the range of the smoking of the tobacco. All classes represent the risk factor morbidity rate, particular in infectious diseases (the tuberculosis of lungs) .
	Gastroenterology	As part of the course, students learn about the symptoms, diagnosis and treatment of digestive system diseases.
	Nephrology	The subject of nephrology is intended to prepare the student in the basics of diagnosis and treatment of primary and secondary kidney diseases, hypertension, water-electrolyte and acid-base disorders, as well as renal replacement therapy with hemodialysis and peritoneal dialysis.
	Infectious diseases	The aim of the course "Infectious Diseases" is to study epidemiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of infectious diseases. The aim of the course "Infectious Diseases" is to present modern knowledge of epidemiology and clinics of infectious diseases, tropical diseases with particular emphasis on current biological threats such as e.g. hepatotropic virus and HIV infections. The course will present principles applicable to diagnosis and treatment of infectious diseases including subjective and physical examination, interpretation of diagnostic test results leading to proper diagnosis and treatment. Principles of isolation of persons infectious or suspected of infectious disease will be discussed.
	Neonatology	The subject neonatology aims to acquire basic knowledge about the physiology and pathology of the newborn, including prematurely born newborns. The student will acquire the skills to assess the health condition of the newborn, perform a physical examination of the newborn, interpret the results of laboratory and imaging tests, learn

		methods of proper nutrition of newborns and the principles of preventive health care necessary to maintain health and support proper development from neonatal age.
	Geriatrics	Lectures and seminars on the subject are aimed at familiarizing students with basic issues in geriatrics. The exercises aim to develop selected practical skills regarding preventive, diagnostic, and therapeutic management of elderly patients. The student will learn the skills of geriatrics.
	Palliative Medicine (including nutrition)	Course contains main information about palliative care and care of dying people and their families before and after death of patient. Palliative care focuses on symptomatic management and emergency treatment.
	Clinical Genetics with Prenatal Diagnostics	Students learn mechanisms of genetic diseases (including neoplastic) and congenital defects common in the population; genetic testing methods (cytogenetic and molecular) in clinical genetics; and ethical aspects of genetic testing.
	Psychiatry with elements of sexology	The aim of Psychiatry with elements of sexology course is to familiarize students with specificity of mental disorders, including principles of contact with a psychiatric patient, diagnostic and therapeutic procedures and law regulations in psychiatry.
	Family medicine	The subject "Family Medicine" aims to familiarise students with the principals of family medicine, the role of the family doctor in the health care system, to broaden the theoretical basis and practical skills of family medicine, to introduce the scope of competence of a family doctor, his/her role in the health care system, integrate previous theoretical and clinical knowledge and apply it in the outpatient setting.
	Clinical Oncology	Oncology classes are conducted in the ninth and tenth semesters. The oncology course includes 4 hours of lectures, 25 hours of seminars and 25 hours of exercises. The main goal is to prepare students to learn about cancer, its etiology, pathogenesis, diagnosis and treatment.
	Clinical pharmacology	Clinical pharmacology aims to prepare students to conduct independently planned pharmacotherapy.
Course module F surgical clinical sciences	Diagnostic imaging	Imaging Diagnostics is designed to teach diagnostic and therapeutic procedures using the techniques of conventional radiology, computed tomography, magnetic resonance imaging, ultrasound, and interventional radiology, with special emphasis on the selection of appropriate techniques, interpretation of results, and patient safety.
	Introduction to surgery	Introduction to Surgery is designed to familiarize the students with the basic tenets of surgery and the major differences between surgical and conservative medicine. The students get acquainted with the practical application of the rules of aseptic and antiseptic technique during tutorials in the surgical suite. They learn the basics of record – keeping, surgical examination and basic surgical skills.
	Cardiac Surgery	The course "Cardiac Surgery" is designed to acquire and consolidate knowledge in the surgical treatment of ischemic heart disease, congenital and acquired heart defects, aortic diseases and other heart diseases.
	Vascular Surgery	The subject of vascular surgery aims to teach practical skills and theoretical knowledge concerning the possibilities and specifics of surgical treatment for patients with vascular diseases, assessing the dynamics of changes in clinical condition, and providing perioperative care for patients after vascular procedures.
	Thoracic Surgery	General thoracic surgery is the field of medicine whose main point of interest is surgical management of the diseases of the thorax (except for cardiac pathologies), It encompasses, first of all, the consequences of thoracic injuries, infections and malignant diseases of the lung, pleura and mediastinum, along with chest wall deformities. General thoracic surgery is strictly connected with the fields of medicine such as pathomorphology, general surgery, pneumonology and oncology.
	General and Endocrine Surgery	The course is designed to consolidate the student's existing knowledge and to deepen it, placing particular emphasis on patients with gastrointestinal diseases, taking into account the differences between patients admitted as urgent and

		elective. And the differences between surgery and conservative medicine. The student learns the basics of surgical record keeping and surgical examination of the patient and minor procedures. The subject of endocrine surgery is intended to familiarize the student with the basic issues of surgical treatment of endocrine diseases. The symptoms of these diseases, their diagnosis and the indications for surgery are discussed. It is important to familiarize yourself with the preparations for the procedure (e.g. the problem of euthyroidism). It is extremely important to discuss the management of endocrine patients after the procedure, both in the early and late period. Students will learn about possible complications after procedures in terms of the ability to recognize and treat them.
	Surgical Oncology	The subject of oncological surgery covers the principles of diagnosis and surgical treatment of oncological diseases, with particular emphasis on combined therapy of cancers of the gastrointestinal tract, skin, soft tissues of the breast and the lymphatic system.
	Transplantology	The aim of the Transplantology course is for the student to acquire knowledge of the principles of immunological selection of donor and recipient, principles of organ procurement and transplantation, mechanisms of transplanted organ rejection and the basic principles of immunosuppressive treatment and its complications.
	Orthopaedic and traumatology	For the medical student to acquire knowledge in the etiology and mechanisms of disease and injuries of the locomotor system, the diagnostic methods used in this system, and therapy correlating to the principles of locomotor system rehabilitation. This course introduces the student to the many facets of orthopaedics: recognition of fractures, a management of late complications of the fracture or treatment failure, casting techniques, and reconstructive surgery.
	Ophthalmology	The aim of the course of ophthalmology is to deliver the knowledge of physiology of the eye, basic and extended diagnostic methods in ophthalmology. During classes students learn about ocular adnexa disorders, corneal, sclera, choroidal and retinal diseases, cataract manifestation, diagnostic and treatment of glaucoma, strabismus and pediatric ocular disorders, methods of medical and surgical treatment in ophthalmology (mainly cataract surgery and vitreoretinal surgery). Its goal is also to prepare the students to recognize and give first aid in ocular trauma.
	Otolaryngology	As part of the Otolaryngology course program, students will learn basic information in the field of clinical otolaryngology. A necessary condition for adequate preparation for classes as well as for their proper implementation is to have basic knowledge of anatomy, physiology and pathophysiology acquired in the earlier years of study. The aim of the classes is to acquire basic knowledge of etiology, disease symptoms and diagnostic methods, clinical course, methods of treatment and rehabilitation, and complications of the most common diseases of the nose and paranasal sinuses, throat, larynx, and ear diseases. An important issue is early diagnosis and treatment of head and neck cancer. Teaching also covers the problems of developmental defects and discussion of speech, hearing and balance disorders.
	Pediatric Surgery	Introduces diagnosis and surgical treatment of congenital defects, infections, and injury sequelae requiring surgery in patients aged 0–18.
	Urology and Andrology	Urology is a field of surgery dealing with surgical diseases of the urinary system in women and men and the male reproductive system. Andrology is a field of medical science that deals with the physiology and disorders of the male reproductive system in terms of basic science, diagnosis and treatment. The lectures are aimed at gaining knowledge in the field of diagnosis and treatment of urological and andrological diseases. The seminars are aimed at acquiring and consolidating knowledge about planning diagnostics, recognizing and treating urological and andrological diseases, with particular emphasis on emergencies, urolithiasis and oncological diseases in urology and andrology. The exercises are devoted to acquiring practical skills in the field of subjective and

		physical examination, the ability to plan diagnostics, diagnosis and treatment of diseases in the field of urology and andrology, including endoscopic and laparoscopic methods.
	Neurosurgery with elements of neurooncology	During the classes, the student will use knowledge of the basics of anatomy, physiology and neurophysiology of the nervous system, and will expand and refine his knowledge of neurology with elements specific to intensive and interventional procedures. He should be able to undertake diagnostic and therapeutic activities in selected disease states, especially in head, spine and central nervous system injuries, as well as in vascular and cancer diseases of the brain and spinal cord, as well as in degenerative changes in the spine.
	Obstetrics and gynecology	The subject of gynecology and obstetrics is intended to acquire and consolidate knowledge in the field of physiology, pathology of pregnancy, management of various diseases during pregnancy, and knowledge about physiological and pathological childbirth. Additionally, teaching methods cover issues related to the physiology of the female reproductive organ and the most common diseases: cancer, inflammation, urogynecological disorders, and include issues of infertility, contraception, physiology and pathology of puberty, and menopause. Additionally, the student acquires knowledge about selected issues related to the physiology and pathology of the newborn. The exercises include acquiring practical skills in the management of gynecological diseases and in the management of pregnancy and childbirth. In addition, they include performing and interpreting additional tests (CTG, ultrasound), as well as, if possible, participating in or assisting in surgical procedures. The exercises include participation in the diagnostic and treatment process in the laboratories and clinics of the gynecology and obstetrics clinic. Some of the exercises are carried out using simulation methods.
	Plastic surgery	The purpose of plastic surgery classes is to convey to students knowledge that is intended to make diagnosis easier for the doctor in the future disease in the patient and referring him to appropriate treatment. Because plastic surgery grows on the border of many fields our task is to indicate who can undertake clinical work treatment, the stage of the disease and for what period life, which is extremely important in the case of a developmental defect.
	Emergency medicine	The subject "Emergency Medicine" is taught in the first and second semester of the fifth year of study and is designed to familiarise the student with the essence of emergency medical activities. In the course of training, the student will acquire the knowledge necessary to promptly recognise and treat a patient in a state of medical emergency, perform cardiopulmonary resuscitation correctly, as well as the principles of management in a mass casualty event and on the battlefield.
	Anesthesiology and Intensive Therapy	The course aims to teach the principles of performing various types of anesthesia for different surgical procedures, managing patients in the perioperative period, using specialized treatment methods in the intensive care unit, and treating basic life-threatening conditions.
	Propaedeutics of Dentistry	During Propaedeutics of Dentistry course students acquire general knowledge from various dental specialties. Essential components of appropriate preparation for the course include possessing general knowledge of anatomy, physiology and pathophysiology. The aim of the course is for students to obtain general knowledge of etiology, diagnostic and treatment of oral cavity diseases and algorithm of dealing with post-operative complications. Oncologic conditions and traumas which require surgical treatment will be also discussed during the course.
	Nuclear medicine	Nuclear medicine is a branch of medicine dealing with the imaging of individual systems and organs with the use of radiation, the source of which are transformations taking place in the nuclei of atoms of radioactive substances. The main goal of the nuclear medicine course in year III is to obtain elementary knowledge of the physical foundations of medicine nuclear and the ability to think logically and draw correct conclusions from the obtained results of individual research organs and systems, and then making further diagnostic and therapeutic decisions

	Regenerative medicine	The aim of the teaching is to familiarize students with the current achievements, current trends, and prospects for the use of tissue engineering methods in the regeneration of tissues and organs, as well as to make medical students aware of the fact that regenerative medicine is a potential new medical specialty. Particular emphasis will be placed on the clinical issues that regenerative medicine deals with. The methods and results of treating patients using tissue engineering techniques will be compared with conventional treatment methods based on available databases, randomized trials, and EBM data. An analysis of clinical trials in the field of regenerative medicine will also be carried out. Students will acquire practical skills in the field of tissue engineering, including cell culture and transplant preparation for clinical applications.
	First aid	First aid aims to provide both an understanding and the ability to provide basic medical procedures in cases of health-related or life-threatening situations. Practice of these procedures prior to those of medical professionals can minimize the risk of adverse outcomes.
	Techniques of Medical Procedures	The subject of techniques of medical procedures aims to develop skills in basic nursing, diagnostic and therapeutic procedures which are necessary in every-day work of various departments of a multi-specialized hospital.
Course module G legal and organizational aspects of medicine	Hygiene and Epidemiology	The aim of this subject is to acquaint students with the principles underlying epidemiology and methods for assessing the health status.
	Public Health	The aim of this subject is to acquaint students with the principles underlying preventive activities of health care service, health status evaluation and monitoring in an individual and a population, and with options for using epidemiological data for evaluation and planning of medical services. Presentations for students will concern issues related to the operational strategy in the public health area, health care systems and the principal problems of public health in Poland and globally.
	Medical Law	The course is intended to highlight the main issues related to healthcare system in Poland, patients' rights and way of conducting contracts between NFZ and medical entities to provide medical benefits to insured people. Course helps students to indentify the differences between accident and malpractice or negligence.
	Forensic Medicine with Elements of Law	The role and tasks of forensic medicine, as an interdisciplinary field with special emphasis on the.: the differences between procedures addressed for legal and therapeutic purposes as well as differences in the workshop of forensic pathologist and other physicians.
Course module H practical clinical training	Internal Diseases	To consolidate theoretical and practical knowledge in internal diseases.
	Paediatrics	The aim of the subject is to practise and improve professional skills using the knowledge gained during lectures, seminars and tutorials at earlier stages of education.
	Surgery	Subject: selected specialization – surgery, to consolidate the acquired theoretical knowledge of surgery and apply it in clinical practice, during the management and treatment of patients in teams with specialist doctors and residents.
	Gynaecology and Obstetrics	Classes include theoretical and practical mastery of the basics of physiology in obstetrics and gynecology, as well as theoretical and practical mastery of the pathology of pregnancy, childbirth and puerperium, as well as diseases of the reproductive organs of a woman, their symptoms, methods of diagnosis, differentiation and treatment.
	Psychiatry	The aim of the course is to improve practical skills in the field of: proper interviewing of the patient, diagnosis of individual mental illnesses, differentiation from other mental and organic diseases, and the choice of pharmacological treatment and psychotherapy.
	Emergency medicine	<i>Emergency medicine - clinical and practical skills instruction</i> is structured to enhance the previously learned skills and education related to advanced life support in various medical emergencies.
	Family medicine	The subject “Family medicine – clinical and practical skills instruction” is designed to:

		- familiarise students with the principals of family medicine, the role of the family physician in the health care system; - broaden theoretical basis and practical skills of family medicine; - acquaint students with the scope of competence of a family doctor, his/her role in the health care system; -integrate previous theoretical and clinical knowledge and apply it in the outpatient setting.
	Chosen Specialty	Aims to consolidate and expand previously acquired knowledge through practical classes. The main goal is the practical use of previously acquired knowledge and skills in clinical conditions (subject chosen by the student).
Course module I professional placements	Summer Placement after Year 1	Aims to acquire skills in patient care, including preparing and administering IV, IM, and SC injections; preparing IV infusions; pressure-sore prevention; assistance with sanitary-hygienic care; assisting in patient examinations. Students should also learn the organizational structure of the hospital and ward, nurses' duties, and keeping medical records.
	Summer Placement after Year 2	Aims to familiarize students with work in primary healthcare and family medicine clinics. Students assist physicians during outpatient and home visits and minor procedures; learn record-keeping; deepen knowledge and skills in first aid for emergencies. Under supervision, they take medical history and conduct physical exams. They learn to use a sphygmomanometer and glucometer, perform ECGs.
	Summer Placement after Year 3	Pediatrics Aims to familiarize students with work in internal medicine clinics/wards. Tasks include expanding knowledge about ward organization and its links with outpatient care; perfecting history-taking and physical exam; learning first aid principles; deepening skills in recognizing and differentiating common diseases—especially acute cases; learning proper interpretation of lab, radiology, and histopathology results. Students should actively participate in unit activities, develop teamwork skills, and organize workstations according to legal and ethical rules.
	Summer Placement after Year 4 –	The aim of the pediatric placement is to supplement knowledge about the organization of a pediatric clinic/ward and its organizational links with outpatient care; to become familiar with the principles of assessing a child's condition and psychophysical development; to learn infant care; to learn the principles of nutrition for healthy and ill children; to improve skills in pediatric physical examination; and to deepen the ability to correctly recognize and differentiate common disease entities, with particular emphasis on acute cases. The student should actively participate in the activities of the unit where the placement is undertaken and develop teamwork skills as well as the ability to organize workstations in accordance with legal and ethical principles. Surgery placement The aim of the surgery placement is to deepen professional skills in surgery using knowledge acquired during lectures and classes. During the placement, the student becomes familiar with the organization of work in a surgical clinic/ward (operating suite/operating room, dressing/procedure room), record-keeping, admission procedures, referrals for treatment to other departments (hospitals), issuing certificates of temporary incapacity for work, and preparing other medical documentation (e.g., referrals for ambulatory care). The student broadens knowledge and skills in the use of surgical instruments and equipment used on the ward; improves physical-examination skills and planning of diagnostic management—especially in emergencies; masters the principles of managing fractures and burns; learns the criteria for qualifying patients for surgical treatment; and masters the rules of asepsis and antisepsis, including surgical hand-scrub techniques and preparation of the operative field. The student improves skills in applying wound dressings and performing minor surgical procedures such as placing and removing sutures, inserting a urinary catheter, and learning the principles and techniques of local anesthesia. The student should actively participate in the activities of the unit where the placement is undertaken, and develop teamwork skills as well as the ability to organize workstations in accordance with legal and ethical principles.
		Aims to deepen and use knowledge, skills, and social competences in gynecology and obstetrics.

	Summer Placement after Year 5 – Obstetrics and Gynecology	Anesthesiology and Intensive Care Aims to deepen knowledge and skills gained during lectures and classes. Students learn ward organization (operating block, ICU); improve pre-anesthetic assessment skills; participate in premedication visits; learn anesthesia methods and patient monitoring during anesthesia. They enhance skills by assisting in central venous access and arterial puncture; performing, under supervision, airway management, mask ventilation, peripheral cannulation, IV infusion setup, injections, proper patient positioning for general anesthesia. They learn and participate in patient emergence, invasive OR monitoring; acquire skills in proper patient assessment based on monitoring and physical exam.
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This study programme is effective as of winter semester of the academic year 2025/2026