

## STUDY PROGRAMME

The programme is valid from the academic year: **2025/2026**

1. **FIELD OF STUDY:** MEDICINE IN ENGLISH
2. **ISCED CODE:** 09120 GROUP: Health and social care, NAME: Medicine
3. **MODE OF STUDY:** FULL-TIME
4. **NUMBER OF SEMESTERS:** 12
5. **PROFESSIONAL TITLE GIVEN TO GRADUATES:** MEDICAL DOCTOR
6. **PROFILE:** GENERAL ACADEMIC
7. **AREA OF SCIENCE:** MEDICAL AND HEALTH SCIENCE
8. **ACADEMIC DISCIPLINE:** (for the field assigned to more than one disciplines, the main discipline where more than 50% of ECTS points will be given should be pointed and number of ECTS points for each disciplines assigned should be specified): MEDICAL SCIENCE (main discipline) – 331 ECTS which is 90% of all points; HEALTH SCIENCE (secondary discipline) – 37 ECTS which is 10% of all points
9. **Number of ECTS points necessary to graduate from studies: 368**
  - 1) number of ECTS points which should be gained in the courses conducted directly by academic teachers or other people conducting classes: **234**
  - 2) number of ECTS points which should be gained in the courses related to scientific activities performed in the discipline or disciplines to which the field of study is assigned (not more than 50% of all ECTS points): **340**
  - 3) number of ECTS points which student gains in elective courses (at least 3% of all ECTS points): **44**
  - 4) number of ECTS points which student has to gain in the courses of humanities or social sciences, not less than 5 ECTS points – in case of the field of studies assigned to disciplines other than humanities or social sciences: **28**
10. **Total number of hours in the study programme: – 9344 including courses conducted directly by academic teachers or other people conducting classes: 5957. Number of hours conducted using distance learning methods and techniques 485**
11. **The concept and outcomes of education** (including description of the graduate's profile):

Medical studies last 6 years (12 semesters). The graduates of medical faculty are given the diploma and professional title of medical doctor. After graduating, students take the Final Medical Examination and after passing it, they are licensed to practice medicine and undertake work in public and private healthcare units, research and academic centres, counselling institutions and institutions dealing with disseminating knowledge in the field of health-promotion as well as in medical universities' clinics.

Finishing medical studies enables graduates to upgrade qualifications, knowledge and skills during medical specializations, supplementary and training courses within various medical fields and to continue studies on the third degree studies (doctoral).

While practicing medical profession, a person with required qualifications deals with providing health service, in particular: examining health condition, diagnosing and preventing diseases, treating and rehabilitating patients, providing medical advice, as well as giving medical opinions and certificates in the scope of one's specialization.

Within the scope of knowledge, the graduate knows and understands: 1) development, structure and functions of the human body in normal and pathological conditions; 2) symptoms and course of diseases; 3) diagnostic and therapeutic procedures in specific diseases; 4) ethical, social and legal conditions in practicing medical profession as well as health-promotion principles, and his/her knowledge is based on scientific evidence; 5) scientific research methods.

Within the scope of abilities, the graduate knows how to: 1) recognize medical problems and determine priorities in medical procedures; 2) recognize life-threatening states and those which require immediate medical intervention; 3) plan diagnostic procedures and interpret their results; 4) implement proper and safe therapeutic procedures and predict their results; 5) plan own educational activity and constantly improve and update knowledge; 6) inspire learning process of others; 7) communicate with the patient and their family in the atmosphere of trust with the consideration of the patient's needs and communicate bad information; 8) communicate with colleagues and share knowledge; 9) critically evaluate scientific research results and explain conclusions properly.

Within the scope of social competence, the graduate is able to: 1) establish and maintain deep and respectful contact with the patient and show understanding towards ideological and cultural differences; 2) do what is right for the patient; 3) respect medical confidentiality and patient's rights; 4) take actions concerning the patient on the basis of ethical principles, being aware of social conditions and restrictions resulting from illness; 5) recognize his/her own limitations and self-evaluate educational deficiencies and needs; 6) promote healthy lifestyle; 7) use reliable information sources; 8) conclude on the basis of own surveys and observations; 9) introduce rules of social conduct and teamwork to the group of specialists, including specialists from other medical professions also in the multicultural and multinational environment; 10) give opinions concerning various aspects of professional activity; 11) take responsibility for own decisions made during professional activities including own safety and safety of other people.

## **12. LEARNING OUTCOMES**

### **Designation of symbols**

- A. Morphological sciences
- B. Scientific basis of medicine
- C. Preclinical sciences
- D. Behavioral and social sciences with elements of professionalism and communication, including the idea of humanism in medicine
- E. Clinical Sciences - Non-surgical treatment
- F. Clinical Sciences- Surgical treatment
- G. Legal and organizational aspects of medicine
- H. Practical clinical teaching in the 6th year of studies
- I. Internships
- K. Social competences

Learning outcome symbol for the faculty	Learning outcomes according to Ordinance of the Ministry of Science and Higher Education concerning learning standards for medicine <sup>1</sup>	After graduating form studies	Reference to the field learning outcomes:	
			universal characteristics for a given level of the Polish Qualifications Framework (the Act on the IQS) <sup>2</sup>	secondary characteristics of learning outcomes for qualifications at levels 6-7 of the Polish Qualifications Framework (Ordinance of the MSHE) <sup>3</sup>
within the scope of <b>KNOWLEDGE</b> , the graduate knows and understands:				
LEK_A.W1.	A.W1.	Human anatomy topographically and functionally, including topographical relations between individual organs along with anatomical, histological and embryological terminology in Polish and English;	P7U_W	P7S_WG
LEK_A.W2.	A.W2.	Basic cellular structures and their functional specifications;	P7U_W	P7S_WG
LEK_A.W3.	A.W3.	Microarchitecture of tissues, extracellular matrix and organs;	P7U_W	P7S_WG
LEK_A.W4.	A.W4.	The stages of development of human embryo, structure and function of fetal membranes and placenta as well as the stages of development of individual organs and the influence of harmful agents on human embryo and fetus (teratogenic agents);	P7U_W	P7S_WG
LEK_B.W1.	B.W1.	The water and electrolyte balance in biological systems;	P7U_W	P7S_WG
LEK_B.W2.	B.W2.	Acid-base homeostasis and mechanisms of buffers and their significance in systemic homeostasis;	P7U_W	P7S_WG
LEK_B.W3.	B.W3.	The concepts of: solubility, osmotic pressure, isotonia, colloidal solutions and Gibbs-Donnan effect;	P7U_W	P7S_WG
LEK_B.W4.	B.W4.	The physical laws describing the flow of fluids and factors affecting the vascular resistance of blood flow;	P7U_W	P7S_WG
LEK_B.W5.	B.W5.	Natural and artificial sources of ionizing radiation and its interaction with the matter;	P7U_W	P7S_WG
LEK_B.W6.	B.W6.	The physical, chemical and molecular basis of how the organs of the senses function;	P7U_W	P7S_WG
LEK_B.W7.	B.W7.	The physical basis of non-invasive imaging methods;	P7U_W	P7S_WG
LEK_B.W8.	B.W8.	The physical principles of selected therapeutic techniques;	P7U_W	P7S_WG
LEK_B.W9.	B.W9.	The structure of lipids and polysaccharides and their functions in the cellular and extracellular structures;	P7U_W	P7S_WG
LEK_B.W10.	B.W10.	The protein primary, secondary, tertiary and quaternary structures as well as the post-translational and functional protein modifications and their significance;	P7U_W	P7S_WG
LEK_B.W11.	B.W11.	The functions of nucleotides in the cell, RNA and DNA primary and secondary structure as well as chromatin structure;	P7U_W	P7S_WG
LEK_B.W12.	B.W12.	The functions of the human genome, transcriptome and proteome and basic methods used in their study, the processes of replication, repair and recombination of DNA, transcription and translation and degradation of DNA, RNA and proteins as well as the concept of the regulation of gene expression;	P7U_W	P7S_WG
LEK_B.W13.	B.W13.	Basic catabolic and anabolic pathways, methods of their regulation and the influence of genetic and environmental factors;	P7U_W	P7S_WG

LEK_B.W14.	B.W14.	Basic methods used in laboratory diagnostics, including electrophoresis of proteins and nucleic acids;	P7U_W	P7S_WG
LEK_B.W15.	B.W15.	Metabolic changes taking place in organs as well as metabolic, biochemical and molecular basis of diseases and therapies;	P7U_W	P7S_WG
LEK_B.W16.	B.W16.	The ways of communication between cells as well as between the cell and the extracellular matrix and signal transduction pathways in the cell as well as examples of disorders in these processes leading to the development of tumors and other diseases;	P7U_W	P7S_WG
LEK_B.W17.	B.W17.	The processes such as: cell cycle, proliferation, differentiation and cell aging, apoptosis and necrosis, and their importance for the functioning of the body;	P7U_W	P7S_WG
LEK_B.W18.	B.W18.	Functions and applications of stem cells in medicine;	P7U_W	P7S_WG
LEK_B.W19.	B.W19.	Basic principles of stimulation and conduction in the nervous system and higher nervous functions, as well as physiology of striated and smooth muscles;	P7U_W	P7S_WG
LEK_B.W20.	B.W20.	The functions and mechanisms of regulation of all organs and systems of the human body as well as the dependence between them;	P7U_W	P7S_WG
LEK_B.W21.	B.W21.	Processes occurring during the aging of the body and changes in the functioning of organs related to aging;	P7U_W	P7S_WG
LEK_B.W22.	B.W22.	The basic quantitative parameters describing the performance of individual systems and organs, including the range of norms and demographic factors affecting the value of these parameters;	P7U_W	P7S_WG
LEK_B.W23.	B.W23.	The basic computer and biostatistical tools used in medicine;	P7U_W	P7S_WK
LEK_B.W24.	B.W24.	The basic methods of statistical analysis used in population and diagnostic studies;	P7U_W	P7S_WK
LEK_B.W25.	B.W25.	The possibilities of modern telemedicine as a tool to support the work of a physician;	P7U_W	P7S_WG
LEK_B.W26.	B.W26.	The principles of conducting scientific research aimed at the development of medicine;	P7U_W	P7S_WG
LEK_C.W1.	C.W1.	Normal human karyotype and various types of sex determination;	P7U_W	P7S_WG
LEK_C.W2.	C.W2.	Genetic causes of hereditary predisposition to cancer;	P7U_W	P7S_WG
LEK_C.W3.	C.W3.	The principles of inheritance, inheritance of quantitative traits, independent inheritance of traits and inheritance of extranuclear genetic information;	P7U_W	P7S_WG
LEK_C.W4.	C.W4.	The genetics of blood groups and serological conflict in Rh system;	P7U_W	P7S_WG
LEK_C.W5.	C.W5.	Genetic determinants of the most common monogenic and polygenic and multifactorial diseases, basic chromosome aberration syndromes, syndromes caused by genomic rearrangements, polymorphisms, epigenetic and post-transcriptional changes;	P7U_W	P7S_WG
LEK_C.W6.	C.W6.	The factors affecting primary and secondary genetic balance of the population;	P7U_W	P7S_WG
LEK_C.W7.	C.W7.	Genetic determinants of congenital malformations and selected rare diseases and the possibility of their prevention;	P7U_W	P7S_WG
LEK_C.W8.	C.W8.	Genetic diagnostic methods and basic indications for their use;	P7U_W	P7S_WG
LEK_C.W9.	C.W9.	Genetic mechanisms of drug resistance acquisition by microorganisms and tumor cells;	P7U_W	P7S_WG
LEK_C.W10.	C.W10.	Microorganisms, including pathogenic ones and those constituting the human microbiome, and forms or development stages of selected parasites that are invasive to humans;	P7U_W	P7S_WG
LEK_C.W11.	C.W11.	The epidemiology of infections with viruses, bacteria, fungi, prions and parasites including geographical range of their occurrence;	P7U_W	P7S_WG

LEK_C.W12.	C.W12.	Pathogenesis and pathophysiology of infections and contagions and the impact of pathogenic factors such as viruses, bacteria, fungi, prions and parasites, on the human body and population, including their methods impacts, consequences of exposure and principles of prevention;	P7U_W	P7S_WG
LEK_C.W13.	C.W13.	The implications of the human body exposure to chemical and physical factors and prevention principles;	P7U_W	P7S_WG
LEK_C.W14.	C.W14.	Etiology, pathogenesis, pathophysiology, transmission routes, forms and prevention of iatrogenic infections;	P7U_W	P7S_WG
LEK_C.W15.	C.W15.	Methods used in microbiological and parasitological diagnostics (indications, principles of conducting, interpretation of the result);	P7U_W	P7S_WG
LEK_C.W16.	C.W16.	Principles of diagnosis of infectious, allergic, autoimmune, cancer and blood diseases, based on the antigen-antibody reaction;	P7U_W	P7S_WG
LEK_C.W17.	C.W17.	Principles of disinfection, sterilization and aseptic procedures;	P7U_W	P7S_WG
LEK_C.W18.	C.W18.	Specific and non-specific mechanisms of humoral and cellular immunity;	P7U_W	P7S_WG
LEK_C.W19.	C.W19.	Major histocompatibility complex;	P7U_W	P7S_WG
LEK_C.W20.	C.W20.	The types of hypersensitivity reactions, types of immunodeficiency and immunomodulation base;	P7U_W	P7S_WG
LEK_C.W21.	C.W21.	The issues concerning the immunology of cancer, immune-related diseases and immunotherapy principles;	P7U_W	P7S_WG
LEK_C.W22.	C.W22.	The genetic basis for selection of the donor and recipient and the basics of the immunology of transplantation;	P7U_W	P7S_WG
LEK_C.W23.	C.W23.	The clinical course of specific and non-specific inflammations and the regeneration processes of tissues and organs;	P7U_W	P7S_WG
LEK_C.W24.	C.W24.	The etiology, mechanisms and consequences of hemodynamic disturbances;	P7U_W	P7S_WG
LEK_C.W25.	C.W25.	Organ pathology, macro and microscopic pathological changes and clinical consequences along with pathological nomenclature;	P7U_W	P7S_WG
LEK_C.W26.	C.W26.	Pathogenesis of diseases, including genetic and environmental conditions;	P7U_W	P7S_WG
LEK_C.W27.	C.W27.	Patomechanism and clinical forms of most common diseases of various systems and organs, metabolic diseases and disorders of water, electrolyte, hormonal and acid-base balance;	P7U_W	P7S_WG
LEK_C.W28.	C.W28.	Individual groups of drugs, their main mechanisms and effects, basic indications and contraindications and basic pharmacokinetic and pharmacodynamic parameters;	P7U_W	P7S_WG
LEK_C.W29.	C.W29.	Physiological and disease conditions of absorption, metabolism and elimination of drugs by the human body;	P7U_W	P7S_WG
LEK_C.W30.	C.W30.	The basic principles of pharmacotherapy including its effectiveness and safety, the need to individualize treatment, including those resulting from pharmacogenetics;	P7U_W	P7S_WG
LEK_C.W31.	C.W31.	The most important side effects of drugs, their interaction and the problem of polypharmacy;	P7U_W	P7S_WG
LEK_C.W32.	C.W32.	The problem of drug resistance, including multi-drug resistance and principles of rational antibiotic therapy;	P7U_W	P7S_WG
LEK_C.W33.	C.W33.	Possibilities and types of biological, cell, gene and targeted therapy in specific diseases;	P7U_W	P7S_WG
LEK_C.W34.	C.W34.	The basic concepts of general toxicology;	P7U_W	P7S_WG
LEK_C.W35.	C.W35.	Groups of drugs which can lead to poisoning when abused;	P7U_W	P7S_WG
LEK_C.W36.	C.W36.	Symptoms of the most common acute poisonings with selected groups of drugs, alcohols and other psychoactive substances, mushrooms and heavy metals;	P7U_W	P7S_WG
LEK_C.W37.	C.W37.	Basic principles of diagnostic and therapeutic procedures in poisoning;	P7U_W	P7S_WG
LEK_C.W38.	C.W38.	The influence of the oxidative stress on cells and its importance in the pathogenesis of diseases and in aging processes;	P7U_W	P7S_WG

LEK_C.W39.	C.W39.	The consequences of vitamins or minerals deficiency and their excess in the body;	P7U_W	P7S_WG
LEK_C.W40.	C.W40.	The consequences of inadequate nutrition, including long-term starvation, taking too large meals and the use of unbalanced diet as well as digestive disorders and malabsorption;	P7U_W	P7S_WG
LEK_C.W41.	C.W41.	Basics of radiotherapy;	P7U_W	P7S_WG
LEK_C.W42.	C.W42.	Molecular basis of cancer diseases and issues in the field of cancer immunology;	P7U_W	P7S_WG
LEK_C.W43.	C.W43.	Practical elements of molecular biology and immunology used in the diagnosis and therapy of oncological diseases.	P7U_W	P7S_WG
LEK_D.W1.	D.W1.	The psycho-physical development of a person from birth to death, including the specifics of physical, emotional, cognitive, and social development;	P7U_W	P7S_WG
LEK_D.W2.	D.W2.	The concepts of health and illness, the influence of the social environment (family, work, social relationships) and sociocultural conditions (origin, social status, religion, nationality, and ethnic group) on a patient's health status;	P7U_W	P7S_WK
LEK_D.W3.	D.W3.	Human behaviors that promote health and the principles of motivating patients towards health-promoting behaviors (Prochaska and DiClemente's change model, motivational interviewing);	P7U_W	P7S_WG
LEK_D.W4.	D.W4.	The concept of stress, including eustress and distress, and the impact of stress on the etiopathogenesis and course of somatic diseases and mental disorders, as well as mechanisms of coping with stress;	P7U_W	P7S_WG
LEK_D.W5.	D.W5.	Social attitudes towards illness, disability, and aging, and the specific impact of stereotypes, prejudices, and discrimination;	P7U_W	P7S_WK
LEK_D.W6.	D.W6.	The concept of empathy and the expressions and behaviors that serve to demonstrate it;	P7U_W	P7S_WK
LEK_D.W7.	D.W7.	The specifics and role of verbal communication (conscious construction of messages) and non-verbal communication (e.g., facial expressions, gestures, managing silence and space);	P7U_W	P7S_WK
LEK_D.W8.	D.W8.	The psychosocial consequences of acute and chronic illness in children, including teenagers, and adults;	P7U_W	P7S_WG
LEK_D.W9.	D.W9.	The psychosocial consequences of hospitalization of children, including teenagers, and adults in emergency situations and chronic diseases;	P7U_W	P7S_WK
LEK_D.W10.	D.W10.	The psychosocial consequences of illness for the patient's family (a family with a sick child, including a teenager, an adult, and an elderly person);	P7U_W	P7S_WK
LEK_D.W11.	D.W11.	The role of the patient's family in the illness process (disease recognition, adaptation to illness, healing) and ways of coping in difficult situations (progression of illness, dying process, grief);	P7U_W	P7S_WK
LEK_D.W12.	D.W12.	Dependencies on psychoactive substances and behavioral addictions, their mechanisms of development, goals and methods of treatment, and prevention strategies;	P7U_W	P7S_WG
LEK_D.W13.	D.W13.	Forms of violence, social determinants of different forms of violence, and the role of a doctor in recognizing it, as well as principles of conduct in cases of suspected violence;	P7U_W	P7S_WK
LEK_D.W14.	D.W14.	The concept of norms and pathology in sexual behavior;	P7U_W	P7S_WK
LEK_D.W15.	D.W15.	The concept of humanism in medicine and the main concepts, theories, and ethical principles that serve as general frameworks for properly interpreting and analyzing moral-medical issues;	P7U_W	P7S_WK
LEK_D.W16.	D.W16.	The concept of patient welfare and patient rights;	P7U_W	P7S_WK
LEK_D.W17.	D.W17.	The philosophy of palliative care and its significance in the context of a dignified death;	P7U_W	P7S_WK

LEK_D.W18.	D.W18.	The history of medicine, characteristics of modern medicine, and the most important discoveries and achievements of leading representatives of Polish and world medicine;	P7U_W	P7S_WK
LEK_D.W19.	D.W19.	The basics of evidence-based medicine;	P7U_W	P7S_WG
LEK_D.W20.	D.W20.	The concepts of patient safety and safety culture and their organizational, communication and management aspects.	P7U_W	P7S_WK
LEK_E.W1.	E.W1.	Principles of nutrition for a healthy child, obesity prevention, and dietary modifications due to diseases;	P7U_W	P7S_WG
LEK_E.W2.	E.W2.	Principles of prevention of diseases in children, including screening tests, wellness exams, and protective vaccinations;	P7U_W	P7S_WG
LEK_E.W3.	E.W3.	<p>Environmental and epidemiological factors, causes, symptoms, principles of diagnosis, and therapeutic management for the most common diseases in children and their complications:</p> <ol style="list-style-type: none"> <li>1. Rickets, tetany, disturbances in water-electrolyte and acid-base balance;</li> <li>2. Heart defects, myocarditis, endocarditis, pericarditis, cardiomyopathies, arrhythmias, heart failure, arterial hypertension, pulmonary hypertension, syncope;</li> <li>3. Respiratory system diseases and allergies, including congenital respiratory system defects, bronchiectasis, respiratory infections, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, atopic dermatitis, anaphylactic shock, angioedema;</li> <li>4. Anemia, bleeding disorders, bone marrow failure, childhood cancers, including typical solid tumors of childhood, primary and secondary immunodeficiencies;</li> <li>5. Acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, peptic ulcer disease, inflammatory bowel diseases, pancreatic disorders, cholestasis, liver diseases, food allergies, congenital gastrointestinal defects;</li> <li>6. Acute kidney injury, chronic kidney disease, urinary tract infections, urinary disorders, congenital urinary system defects, vesicoureteral reflux disease, kidney stones, glomerular diseases, tubulointerstitial diseases (tubulopathies, renal tubular acidosis), genetically determined kidney diseases, renovascular hypertension;</li> <li>7. Growth disorders, thyroid and parathyroid diseases, adrenal gland disorders, diabetes, obesity, puberty disorders, gonadal function disorders;</li> <li>8. Cerebral palsy, encephalitis, meningitis, seizures, epilepsy;</li> <li>9. The most common infectious diseases in childhood;</li> <li>10. Systemic connective tissue diseases, including juvenile idiopathic arthritis, systemic lupus erythematosus, dermatomyositis, systemic vasculitis, and other causes of musculoskeletal pain (non-inflammatory, infectious and reactive arthritis, and juvenile spondyloarthropathies).</li> </ol>	P7U_W	P7S_WG
LEK_E.W4.	E.W4.	Issues of maltreated and sexually abused children, intellectual disability, and behavioral disorders, psychoses, addictions, autism spectrum disorders, eating and elimination disorders in children;	P7U_W	P7S_WG
LEK_E.W5.	E.W5.	Basic methods of diagnosis and therapy of the fetus.	P7U_W	P7S_WG
LEK_E.W6.	E.W6.	Environmental and epidemiological factors, causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common internal diseases occurring in adults and their complications:	P7U_W	P7S_WG

		<ol style="list-style-type: none"> <li>1. Cardiovascular diseases, including ischemic heart disease, heart defects, diseases of the endocardium, heart muscle, pericardium, heart failure (acute and chronic), diseases of arterial and venous vessels, primary and secondary arterial hypertension, pulmonary hypertension;</li> <li>2. Respiratory diseases, including diseases of the respiratory tract, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleural diseases, mediastinal diseases, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory system tumors;</li> <li>3. Gastrointestinal diseases, including diseases of the oral cavity, esophagus, stomach and duodenum, intestines, pancreas, liver, biliary tract and gallbladder;</li> <li>4. Endocrine diseases, including diseases of the hypothalamus and pituitary gland, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumors, multiple endocrine neoplasia syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidemia, and hypoglycemia;</li> <li>5. Renal and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, primary and secondary glomerular diseases (including diabetic nephropathy and systemic diseases), interstitial kidney diseases, renovascular hypertension, kidney cysts, kidney stones, urinary tract infections (upper and lower tract), pregnancy-related kidney diseases, and urinary system tumors;</li> <li>6. Hematopoietic system diseases, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemias, myelo- and lymphoproliferative neoplasms, myelodysplastic syndromes, bleeding disorders, thrombophilia, and blood disorders in other organ diseases.</li> <li>7. Rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, systemic sclerosis, idiopathic inflammatory myopathies), spondyloarthropathies, crystal-induced arthropathies, erythema nodosum, arthritis associated with infectious factors, vasculitis, and non-inflammatory joint and bone diseases (degenerative diseases, soft tissue rheumatism, osteoporosis, fibromyalgia);</li> <li>8. Allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema;</li> <li>9. Water-electrolyte and acid-base disorders (states of dehydration, states of fluid overload, electrolyte imbalances, acidosis, and alkalosis).</li> </ol>		
LEK_E.W7.	E.W7.	Principles of pharmacotherapy in patients with renal failure and renal replacement therapy;	P7U_W	P7S_WG
LEK_E.W8.	E.W8.	Principles of nutritional therapy and fluid therapy in various disease states;	P7U_W	P7S_WG
LEK_E.W9.	E.W9.	The course and symptoms of the aging process, principles of comprehensive geriatric assessment, and interdisciplinary care for the elderly;	P7U_W	P7S_WG
LEK_E.W10.	E.W10.	Differences in clinical symptoms, diagnosis, and therapy of the most common diseases occurring in the elderly;	P7U_W	P7S_WG
LEK_E.W11.	E.W11.	Risks associated with the hospitalization of elderly patients;	P7U_W	P7S_WG
LEK_E.W12.	E.W12.	Basic principles of organizing care for the elderly and the burden on caregivers of the elderly;	P7U_W	P7S_WG
LEK_E.W13.	E.W13.	Most common paraneoplastic syndromes;	P7U_W	P7S_WG
LEK_E.W14.	E.W14.	Types of vascular access and their use in oncology;	P7U_W	P7S_WG
LEK_E.W15.	E.W15.	Basic neurological symptom syndromes.	P7U_W	P7S_WG



LEK_E.W16.	E.W16.	<p>Environmental and epidemiological factors, causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common neurological diseases and their complications:</p> <ol style="list-style-type: none"> <li>1. Headaches, including migraines, tension-type headaches, headache syndromes, and neuralgia of the fifth and third cranial nerves;</li> <li>2. Cerebrovascular diseases, particularly stroke;</li> <li>3. Epilepsy;</li> <li>4. Infections of the nervous system, especially meningitis, Lyme disease, herpes encephalitis, and neurotransmission diseases;</li> <li>5. Dementias, particularly Alzheimer's disease, frontotemporal dementia, vascular dementia, and other dementia syndromes;</li> <li>6. Basal ganglia disorders, particularly Parkinson's disease;</li> <li>7. Demyelinating diseases, especially multiple sclerosis;</li> <li>8. Neuromuscular system diseases, particularly amyotrophic lateral sclerosis, sciatica, compressive neuropathies;</li> <li>9. Cranio-cerebral traumas, especially concussion;</li> <li>10. Tumors;</li> </ol>	P7U_W	P7S_WG
LEK_E.W17.	E.W17.	General symptomatology of mental disorders and principles of their classification according to the main classification systems;	P7U_W	P7S_WG
LEK_E.W18.	E.W18.	<p>Environmental and epidemiological factors, causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common psychiatric diseases and their complications:</p> <ol style="list-style-type: none"> <li>1. Schizophrenia;</li> <li>2. Affective disorders;</li> <li>3. Neurotic and adjustment disorders;</li> <li>4. Eating disorders;</li> <li>5. Disorders related to the use of psychoactive substances;</li> <li>6. Sleep disorders;</li> <li>7. Dementias;</li> <li>8. Personality disorders;</li> </ol>	P7U_W	P7S_WG
LEK_E.W19.	E.W19.	Issues related to suicidal behaviors;	P7U_W	P7S_WG
LEK_E.W20.	E.W20.	Specifics of mental disorders and their treatment in children, including adolescents, and the elderly;	P7U_W	P7S_WG
LEK_E.W21.	E.W21.	Symptoms of mental disorders in the course of somatic diseases, their impact on the course and prognosis of the primary disease, and principles of their treatment;	P7U_W	P7S_WG
LEK_E.W22.	E.W22.	Issues related to human sexuality and basic disorders associated with it;	P7U_W	P7S_WG
LEK_E.W23.	E.W23.	Legal regulations concerning mental health protection, with particular emphasis on the principles of admission to a psychiatric hospital;	P7U_W	P7S_WK
LEK_E.W24.	E.W24.	<p>Topics in oncology, including:</p> <ol style="list-style-type: none"> <li>1. Genetic, environmental, and epidemiological determinants, causes, symptoms, principles of diagnosis, and therapeutic management in the most common cancers and their complications;</li> </ol>	P7U_W	P7S_WG

		<ol style="list-style-type: none"> <li>2. Clinical symptoms of the most common paraneoplastic syndromes;</li> <li>3. Basics of early cancer detection, principles of screening tests, and preventive actions in oncology;</li> <li>4. Possibilities and limitations of contemporary cancer treatment (surgical methods, radiotherapy, and systemic methods, including immunotherapy), indications for cellular and gene therapies, and targeted and personalized treatments;</li> <li>5. Early and late complications of oncological treatment;</li> <li>6. The role of supportive care, including nutritional support;</li> <li>7. Principles of organizing care for oncology patients, including genetic counseling and multidisciplinary care;</li> <li>8. Practical aspects of statistics in oncology, including principles of interpreting clinical trial results;</li> <li>9. Most important scales and classifications used in oncology;</li> <li>10. Principles of conducting targeted physical examinations of adults in the area of the breast and prostate gland;</li> <li>11. Principles of planning diagnostic, therapeutic, and preventive procedures in cancer treatment based on test results and provided medical documentation.</li> </ol>		
LEK_E.W25.	E.W25.	<p>Principles of qualifying for palliative care and therapeutic management in the most common problems of palliative medicine, including:</p> <ol style="list-style-type: none"> <li>1. Symptomatic treatment of the most common somatic symptoms;</li> <li>2. Management of cancer cachexia and the prevention and treatment of bedsores;</li> <li>3. Most common emergencies in palliative medicine;</li> </ol>	P7U_W	P7S_WG
LEK_E.W26.	E.W26.	Principles of palliative care for patients in a terminal state;	P7U_W	P7S_WG
LEK_E.W27.	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;	P7U_W	P7S_WG
LEK_E.W28.	E.W28.	The concept of disability;	P7U_W	P7S_WG
LEK_E.W29.	E.W29.	The role of medical rehabilitation and methods used therein;	P7U_W	P7S_WG
LEK_E.W30.	E.W30.	Indications for medical rehabilitation in the most common diseases;	P7U_W	P7S_WG
LEK_E.W31.	E.W31.	Basic issues of prevention and principles of management in the case of occupational exposure to hazardous and harmful factors;	P7U_W	P7S_WG
LEK_E.W32.	E.W32.	Principles of management in case of suspicion and detection of infectious disease;	P7U_W	P7S_WG
LEK_E.W33.	E.W33.	<p>Environmental and epidemiological determinants, causes, symptoms, principles of diagnosing and therapeutic as well as preventive management of the most common infectious diseases and their complications:</p> <ol style="list-style-type: none"> <li>1. Bacterial diseases, including streptococcal, staphylococcal, pneumococcal, and meningococcal infections, whooping cough, tuberculosis, Lyme disease, and gastrointestinal infections;</li> <li>2. Viral diseases, including respiratory and gastrointestinal tract infections, viral hepatitis, Herpesviridae infections, human immunodeficiency virus, and neurotropic viruses;</li> <li>3. Parasitic diseases, including giardiasis, amoebiasis, toxoplasmosis, malaria, toxocariasis, trichinosis, ascariasis, tapeworm infections, and enterobiasis;</li> <li>4. Fungal infections, including candidiasis, aspergillosis, and pneumocystosis;</li> <li>5. Hospital-acquired infections;</li> </ol>	P7U_W	P7S_WG

LEK_E.W34.	E.W34.	Principles of management in case of exposure to potentially infectious material;	P7U_W	P7S_WG
LEK_E.W35.	E.W35.	Environmental and epidemiological determinants, causes, symptoms, principles of diagnosing and therapeutic management in the most common dermatological and sexually transmitted diseases;	P7U_W	P7S_WG
LEK_E.W36.	E.W36.	Causes, symptoms, principles of diagnosing and therapeutic management in the most common genetically determined diseases in children and adults;	P7U_W	P7S_WG
LEK_E.W37.	E.W37.	Environmental and epidemiological determinants, causes, symptoms, principles of diagnosing and therapeutic management in the most common diseases in general practice;	P7U_W	P7S_WG
LEK_E.W38.	E.W38.	Principles of health-promoting behaviors, basics of prevention and early detection of the most common lifestyle diseases, and principles of screening in these diseases;	P7U_W	P7S_WG
LEK_E.W39.	E.W39.	Types of biological materials used in laboratory diagnostics and principles of sample collection for testing;	P7U_W	P7S_WG
LEK_E.W40.	E.W40.	Possibilities and limitations of laboratory tests;	P7U_W	P7S_WG
LEK_E.W41.	E.W41.	Indications for implementing monitored therapy;	P7U_W	P7S_WG
LEK_E.W42.	E.W42.	Indications for blood component therapy and principles of their administration;	P7U_W	P7S_WG
LEK_F.W1.	F.W1.	Causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common diseases requiring procedural treatment in adults: 1. Acute and chronic abdominal diseases; 2. Chest diseases; 3. Limb, head, and neck diseases; 4. Bone fractures and organ injuries; 5. Cancers;	P7U_W	P7S_WG
LEK_F.W2.	F.W2.	Causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common congenital defects and diseases requiring procedural treatment in children;	P7U_W	P7S_WG
LEK_F.W3.	F.W3.	Basic classical and minimally invasive procedural techniques;	P7U_W	P7S_WG
LEK_F.W4.	F.W4.	Principles of qualifying for basic surgical procedures and invasive diagnostic-therapeutic procedures, and the most common complications;	P7U_W	P7S_WG
LEK_F.W5.	F.W5.	Most common complications of modern oncological treatment;	P7U_W	P7S_WG
LEK_F.W6.	F.W6.	Principles of perioperative safety, patient preparation for surgery, administration of general and local anesthesia, and controlled sedation;	P7U_W	P7S_WG
LEK_F.W7.	F.W7.	Principles of postoperative treatment including pain therapy and postoperative monitoring;	P7U_W	P7S_WG
LEK_F.W8.	F.W8.	Indications and principles of applying intensive therapy;	P7U_W	P7S_WG
LEK_F.W9.	F.W9.	Guidelines in the field of cardiopulmonary resuscitation for newborns, children, and adults;	P7U_W	P7S_WG
LEK_F.W10.	F.W10.	Common life-threatening conditions in children and adults and the principles of management in these states, particularly in: 1. Sepsis; 2. Shock; 3. Hemorrhages; 4. Fluid and electrolyte and acid-base disorders;	P7U_W	P7S_WG

		<ul style="list-style-type: none"> <li>5. Poisonings;</li> <li>6. Burns, hypothermia, and hyperthermia;</li> <li>7. Other acute conditions of: <ul style="list-style-type: none"> <li>a) Cardiovascular origin,</li> <li>b) Respiratory origin,</li> <li>c) Neurological origin,</li> <li>d) Renal origin,</li> <li>e) Oncological and hematological origin,</li> <li>f) Diabetological and endocrinological origin,</li> <li>g) Psychiatric origin,</li> <li>h) Ophthalmological origin,</li> <li>i) Otolaryngological origin,</li> <li>j) Gynecological, obstetrical, and urological origin;</li> </ul> </li> </ul>		
LEK_F.W11.	F.W11.	Principles of management in cases of suspected sexual violence;	P7U_W	P7S_WG
LEK_F.W12.	F.W12.	Principles of the integrated National Medical Rescue System;	P7U_W	P7S_WG
LEK_F.W13.	F.W13.	Invasive methods of pain management;	P7U_W	P7S_WG
LEK_F.W14.	F.W14.	Principles of managing long-term central venous catheters;	P7U_W	P7S_WG
LEK_F.W15.	F.W15.	Reproductive functions of women, related disorders, and diagnostic and therapeutic management, particularly concerning: <ul style="list-style-type: none"> <li>1. The menstrual cycle and its disorders;</li> <li>2. Pregnancy;</li> <li>3. Physiological childbirth, pathological delivery, and postpartum period;</li> <li>4. Inflammations and neoplasms of the genital organs;</li> <li>5. Birth regulation and assisted reproduction;</li> <li>6. Menopause;</li> <li>7. Basic methods of gynecological diagnosis and procedures;</li> </ul>	P7U_W	P7S_WG
LEK_F.W16.	F.W16.	Reproductive functions of men, related disorders, and diagnostic and therapeutic management;	P7U_W	P7S_WG
LEK_F.W17.	F.W17.	The issues related to currently used imaging studies, particularly: <ul style="list-style-type: none"> <li>1. Radiological symptomatology of basic diseases;</li> <li>2. Instrumental methods and imaging techniques used in medical procedures;</li> <li>3. Indications, contraindications, and patient preparation for various types of imaging studies, and contraindications for the use of contrast agents;</li> </ul>	P7U_W	P7S_WG
LEK_F.W18.	F.W18.	Topics in the field of ophthalmic diseases, particularly: <ul style="list-style-type: none"> <li>1. Causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common eye diseases;</li> <li>2. Ophthalmic complications of systemic diseases along with their symptomatology and management methods in such cases;</li> </ul>	P7U_W	P7S_WG

		<p>3. Surgical management in various eye diseases;</p> <p>4. Groups of systemically used drugs associated with ophthalmic complications and contraindications, and their mechanism of action;</p>		
LEK_F.W19.	F.W19.	<p>Topics in the field of otolaryngology, phoniatics, and audiology, particularly:</p> <p>1. Causes, symptoms, principles of diagnosis, and therapeutic management in diseases of the ear, nose, paranasal sinuses, oral cavity, pharynx, and larynx;</p> <p>2. Diseases of the facial nerve and selected neck structures;</p> <p>3. Principles of diagnostic and therapeutic management in mechanical injuries of the ear, nose, larynx, and esophagus;</p> <p>4. Principles of diagnostic and therapeutic management in disorders of hearing, voice, and speech;</p>	P7U_W	P7S_WG
LEK_F.W20.	F.W20.	<p>Topics in the field of neurology, particularly causes, symptoms, principles of diagnosis, and therapeutic management in the case of the most common diseases of the central nervous system concerning:</p> <p>1. Cerebral edema and its consequences, with particular emphasis on emergency states;</p> <p>2. Other forms of intracranial hypertension and their consequences;</p> <p>3. Cranio-cerebral injuries;</p> <p>4. Vascular malformations of the central nervous system;</p> <p>5. Neoplastic tumors of the central nervous system;</p> <p>6. Diseases of the spine and spinal cord;</p>	P7U_W	P7S_WG
LEK_F.W21.	F.W21.	Principles of promoting tissue and cell donation, indications for transplantation of vascularized organs, tissues, and hematopoietic cells, complications of treatment, and principles of long-term care after transplantation;	P7U_W	P7S_WG
LEK_F.W22.	F.W22.	Conditions in which the patient's remaining lifespan, functional status, or preferences limit management in accordance with guidelines defined for a particular disease;	P7U_W	P7S_WG
LEK_F.W23.	F.W23.	Principles of raising suspicion and diagnosing brain death;	P7U_W	P7S_WG
LEK_G.W1.	G.W1.	Methods for assessing the health status of individuals and populations, indicators and principles for monitoring population health, disease and medical procedure classification systems;	P7U_W	P7S_WG
LEK_G.W2.	G.W2.	Determinants of diseases, methods for identifying and studying disease risk factors, advantages and disadvantages of epidemiological studies, and principles of causal inference in medicine;	P7U_W	P7S_WG
LEK_G.W3.	G.W3.	Epidemiology of infectious diseases, including healthcare-associated infections, and non-communicable diseases, types and methods of prevention at different stages of the natural history of disease, and the role and principles of epidemiological surveillance;	P7U_W	P7S_WG
LEK_G.W4.	G.W4.	The concept and functions of public health, the concept, tasks, and methods of health promotion, the concept of quality in healthcare and the factors influencing it, the structure and organization of the healthcare system at the national and global levels, and the impact of economic conditions on healthcare opportunities;	P7U_W	P7S_WG
LEK_G.W5.	G.W5.	Legal regulations concerning patient rights and the Patient Ombudsman, as well as important legal regulations in the field of labor law, the basics of practicing as a physician, and the functioning of the medical self-government;	P7U_W	P7S_WG

LEK_G.W6.	G.W6.	Legal regulations concerning the organization and financing of the healthcare system, the provision of publicly funded healthcare services, and the principles of organizing healthcare entities, the functioning of information and communication tools and services in healthcare (e-health);	P7U_W	P7S_WK
LEK_G.W7.	G.W7.	Legal obligations of a physician in confirming a patient's death;	P7U_W	P7S_WK
LEK_G.W8.	G.W8.	Legal regulations concerning medical experimentation and conducting scientific research involving humans;	P7U_W	P7S_WG
LEK_G.W9.	G.W9.	Legal regulations concerning transplants, artificial procreation, abortion, cosmetic procedures, palliative care, persistent therapy, mental illnesses, infectious diseases;	P7U_W	P7S_WK
LEK_G.W10.	G.W10.	Legal regulations regarding the doctor's obligations in the event of suspicion of domestic violence;	P7U_W	P7S_WK
LEK_G.W11.	G.W11.	Basic regulations in the field of pharmaceutical law, including the principles of trading medicinal and medical products, issuing prescriptions, including e-prescriptions, drug reimbursement, cooperation between doctors and pharmacists, and reporting adverse drug reactions;	P7U_W	P7S_WK
LEK_G.W12.	G.W12.	Legal regulations regarding medical confidentiality, criminal, civil, and professional liability of physicians, principles of maintaining, storing, and providing access to medical records, including e-documentation, and the protection of personal data;	P7U_W	P7S_WG
LEK_G.W13.	G.W13.	The concept of violent death and sudden death, and the differences between trauma and injury;	P7U_W	P7S_WG
LEK_G.W14.	G.W14.	Legal foundations and principles of a physician's conduct during the examination of a body at the site of its discovery and forensic-medical examination of the deceased;	P7U_W	P7S_WG
LEK_G.W15.	G.W15.	Principles of forensic-medical diagnostics and expert opinion in cases involving infanticide and reconstruction of the circumstances of a road accident;	P7U_W	P7S_WG
LEK_G.W16.	G.W16.	Principles for preparing expert opinions as a court-appointed expert;	P7U_W	P7S_WK
LEK_G.W17.	G.W17.	Principles of forensic-medical expert opinions regarding the capacity to participate in procedural acts, biological effect, and health impairment;	P7U_W	P7S_WK
LEK_G.W18.	G.W18.	The concept and typology of medical errors, adverse events, their most common causes, consequences, principles of prevention, and expert opinion in such cases;	P7U_W	P7S_WG
LEK_G.W19.	G.W19.	Principles for collecting materials for toxicological and hemogenetic tests;	P7U_W	P7S_WG
LEK_G.W20.	G.W20.	Legal regulations regarding the transfer of information concerning 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;	P7U_W	P7S_WK
LEK_G.W21.	G.W21.	Epidemiology of cancer diseases, in particular their nutritional, environmental and other lifestyle conditions affecting oncological risk;	P7U_W	P7S_WG
LEK_G.W22.	G.W22.	the importance of screening tests in oncology, including the risks associated with diagnostic tests in healthy people, and health benefits in relation to the most common cancer diseases in the Republic of Poland.	P7U_W	P7S_WG

within the scope of **SKILLS**, the graduate knows how to:

LEK_A.U1.	A.U1.	Operate the optical microscope, also making use of immersion;	P7U_U	P7S_UW
-----------	-------	---	-------	--------

LEK_A.U2.	A.U2.	Recognize histological structures of organs, tissues, cells and cellular structures on the optical or histological microscope images, describe and interpret the structure and relations between the structure and the function;	P7U_U	P7S_UW
LEK_A.U3.	A.U3.	Explain the anatomical basis for clinical examination;	P7U_U	P7S_UW
LEK_A.U4.	A.U4.	Make conclusions as to the relationship between anatomical structures on the basis of intravital diagnostic tests, in particular in the field of radiology (plain images, tests using contrast agents, CT scans and magnetic resonance imaging);	P7U_U	P7S_UW
LEK_B.U1.	B.U1.	Use the knowledge of the laws of physics to explain the impact of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionizing radiation on the body and its elements;	P7U_U	P7S_UW
LEK_B.U2.	B.U2.	Assess harmful ionizing radiation dose on normal as well as diseased body tissues and adhere to the principles of radiation protection;	P7U_U	P7S_UW
LEK_B.U3.	B.U3.	Determine molar and percentage concentration of compounds and the concentration of substances in isosmotic solutions, both mono- and multi-component;	P7U_U	P7S_UW
LEK_B.U4.	B.U4.	Determine the solubility of inorganic compounds, chemical substrate for the solubility of organic compounds, or lack thereof, and practical significance for nutrition and therapy;	P7U_U	P7S_UW
LEK_B.U5.	B.U5.	Determine the pH of the solution and the effect of changes in the pH on the inorganic and organic compounds;	P7U_U	P7S_UW
LEK_B.U6.	B.U6.	Envisage the development of biochemical processes depending on the state of the cells' energy;	P7U_U	P7S_UW
LEK_B.U7.	B.U7.	Perform simple function tests evaluating the functioning of the human body as a stable regulation system (stress and exercise tests) and interpret the figures on the basic physiological variables;	P7U_U	P7S_UW
LEK_B.U8.	B.U8.	Use medical databases and properly interpret the information contained therein necessary to solve problems in the field of basic and clinical sciences;	P7U_U	P7S_UW
LEK_B.U9.	B.U9.	Select appropriate statistical tests, performs basic statistical analyses, use suitable methods of presentation of results;	P7U_U	P7S_UW
LEK_B.U10.	B.U10.	Classify the methodology of scientific research, including distinguishing between experimental and observational studies, along with their subtypes, rank them according to the reliability of the provided results and correctly assess the quality of scientific evidence;	P7U_U	P7S_UW
LEK_B.U11.	B.U11.	Plan and perform basic scientific research, interpret the results and draw conclusions;	P7U_U	P7S_UW
LEK_B.U12.	B.U12.	Use basic laboratory and molecular techniques;	P7U_U	P7S_UW
LEK_C.U1.	C.U1.	Plot and analyze pedigrees and identify clinical and pedigree features suggesting the genetic basis of diseases;	P7U_U	P7S_UW
LEK_C.U2.	C.U2.	Make a decision on the need to perform cytogenetic and molecular tests;	P7U_U	P7S_UW
LEK_C.U3.	C.U3.	Read basic genetic test results, including karyotypes;	P7U_U	P7S_UW
LEK_C.U4.	C.U4.	Determine genetic risk based on pedigree and genetic test results in the case of chromosomal aberrations, genomic rearrangements, single-gene and multifactorial diseases;	P7U_U	P7S_UW
LEK_C.U5.	C.U5.	Recognize pathogens under a microscope;	P7U_U	P7S_UW
LEK_C.U6.	C.U6.	Interpret the results of microbiological tests;	P7U_U	P7S_UW

LEK_C.U7.	C.U7.	Make connection between images of tissue, organ damage and clinical symptoms of the disease, medical history and the results of laboratory determinations in order to establish the diagnosis of the most common diseases of adults and children;	P7U_U	P7S_UW
LEK_C.U8.	C.U8.	Perform simple pharmacokinetic calculations;	P7U_U	P7S_UW
LEK_C.U9.	C.U9.	Select drugs at appropriate doses for correcting the pathological phenomena in the body and in individual organs;	P7U_U	P7S_UW
LEK_C.U10.	C.U10.	Design the scheme of rational infection chemotherapy, both empirical and targeted;	P7U_U	P7S_UW
LEK_C.U11.	C.U11.	Prepare transcripts of all forms of prescription of medicinal substances and issue prescriptions, including e-prescriptions, in accordance with legal regulations;	P7U_U	P7S_UW
LEK_C.U12.	C.U12.	Look for reliable information about medicinal products, with particular emphasis on the Summary of Product Characteristics (SmPC) and databases;	P7U_U	P7S_UK
LEK_C.U13.	C.U13.	Assess toxicological danger in specific age groups and in the states of liver and kidney failure, as well as prevent drug intoxication;	P7U_U	P7S_UW
LEK_D.U1.	D.U1.	Adhere to ethical standards in professional actions, including planning and conducting the therapeutic process in accordance with ethical values and the idea of humanism in medicine;	P7U_U	P7S_KR
LEK_D.U2.	D.U2.	Recognize the ethical dimension of medical decisions and distinguish factual aspects from normative ones;	P7U_U	P7S_KR
LEK_D.U3.	D.U3.	Observe patient rights;	P7U_U	P7S_KO
LEK_D.U4.	D.U4.	Demonstrate responsibility for improving one's qualifications and sharing knowledge with others;	P7U_U	P7S_UU
LEK_D.U5.	D.U5.	Critically analyze medical literature, including in English, and draw conclusions;	P7U_U	P7S_UW
LEK_D.U6.	D.U6.	Communicate with patients in a foreign language at the B2+ level of the Common European Framework of Reference for Languages;	P7U_U	P7S_UK
LEK_D.U7.	D.U7.	Develop and refine self-awareness, the ability for self-reflection, and self-care, and contemplate with others one's own communication and behavior;	P7U_U	P7S_UU
LEK_D.U8.	D.U8.	Recognize one's own emotions and manage them in relationships with others, to effectively perform work despite one's emotional reactions;	P7U_U	P7S_UO
LEK_D.U9.	D.U9.	Describe and critically evaluate one's own behavior and communication style, considering alternative behaviors;	P7U_U	P7S_UK
LEK_D.U10.	D.U10.	Appropriately use open-ended questions, closed questions, paraphrasing, clarification, internal and final summaries, signaling, and active listening in various situations. For instance, detecting and recognizing signals sent by the interlocutor, using verbal and non-verbal techniques) and facilitation (encouraging the interlocutor to speak);	P7U_U	P7S_UW
LEK_D.U11.	D.U11.	Adapt verbal communication to the needs of the patient, expressing oneself clearly and avoiding medical jargon;	P7U_U	P7S_UK
LEK_D.U12.	D.U12.	Recognize and analyze difficult situations and challenges related to communication, including crying, strong emotions, fear, interrupting speech, sensitive and troublesome issues, silence, withdrawal, aggressive and demanding behaviors, and deal with them constructively;	P7U_U	P7S_UK
LEK_D.U13.	D.U13.	Establish contact with the patient and the person accompanying the patient that aids in building a proper relationship (e.g., the 4 Habits Model: Invest in the beginning, Demonstrate empathy, Elicit the patient's perspective, Invest in the end);	P7U_U	P7S_UK



LEK_D.U14.	D.U14.	View the situation from the patient's perspective, creating an appropriate context for conversation and using elicitation methods, and then incorporate it into constructing verbal messages;	P7U_U	P7S_UK
LEK_E.U1.	E.U1.	Collect a medical history from an adult, including an elderly person, utilizing skills related to content, process, and perception of communication, considering both biomedical and patient perspectives;	P7U_U	P7S_UK
LEK_E.U2.	E.U2.	Collect a medical history from a child and their caregivers, using skills related to content, process, and perception of communication, considering both biomedical and patient perspectives;	P7U_U	P7S_UK
LEK_E.U3.	E.U3.	Collect a medical history in a health and life-threatening situation using the SAMPLE scheme (S – Symptoms, A – Allergies, M – Medications, P – Past medical history, L – Last meal, E – Events prior to injury/illness);	P7U_U	P7S_UW
LEK_E.U4.	E.U4.	Conduct a targeted physical examination of an adult in the area of the breast and prostate gland;	P7U_U	P7S_UW
LEK_E.U5.	E.U5.	Conduct a comprehensive and targeted physical examination of an adult adapted to a specific clinical situation, including: 1. General internal examination; 2. Neurological examination; 3. Gynecological examination; 4. Musculoskeletal system examination; 5. Ophthalmological examination; 6. Otolaryngological (ENT) examination; 7. Geriatric examination;	P7U_U	P7S_UW
LEK_E.U6.	E.U6.	Conduct a comprehensive and targeted physical examination of a child from the neonatal period to adolescence adapted to a specific clinical situation, including: 1. General pediatric examination; 2. Neurological examination; 3. Musculoskeletal system examination; 4. Ophthalmological examination; 5. Otolaryngological (ENT) examination;	P7U_U	P7S_UW
LEK_E.U7.	E.U7.	Conduct a psychiatric examination of a patient and assess their mental state;	P7U_U	P7S_UW
LEK_E.U8.	E.U8.	Conduct health check-ups, including compiling anthropometric measurements and blood pressure data with percentile charts and assessing the degree of maturation;	P7U_U	P7S_UW
LEK_E.U9.	E.U9.	Recognize the most common symptoms of illness in adults, apply diagnostic tests and interpret their results, conduct differential diagnosis, implement therapy, monitor treatment effects, and assess indications for specialist consultation, especially in cases of symptoms such as: 1. Fever; 2. Weakness; 3. Loss of appetite; 4. Weight loss; 5. Shock; 6. Cardiac arrest;	P7U_U	P7S_UW

		<ul style="list-style-type: none"> <li>7. Altered consciousness, including fainting;</li> <li>8. Swelling;</li> <li>9. Rash.</li> <li>10. Cough and expectoration;</li> <li>11. Hemoptysis;</li> <li>12. Dyspnea;</li> <li>13. Nasal and aural discharge;</li> <li>14. Thoracic pain;</li> <li>15. Cardiac palpitations;</li> <li>16. Cyanosis;</li> <li>17. Nausea and vomiting;</li> <li>18. Dysphagia;</li> <li>19. Abdominal pain;</li> <li>20. Hematochezia;</li> <li>21. Constipation and diarrhea;</li> <li>22. Jaundice;</li> <li>23. Abdominal bloating and resistance;</li> <li>24. Anemia;</li> <li>25. Lymphadenopathy;</li> <li>26. Urinary retention and incontinence;</li> <li>27. Hematuria and proteinuria;</li> <li>28. Menstrual irregularities;</li> <li>29. Depressed mood and anxiety states;</li> <li>30. Memory impairment and cognitive dysfunction;</li> <li>31. Cephalalgia;</li> <li>32. Vertigo;</li> <li>33. Paresis;</li> <li>34. Seizures;</li> <li>35. Dorsalgia;</li> <li>36. Arthralgia;</li> <li>37. Trauma or burn;</li> <li>38. Dehydration and fluid overload.</li> </ul>		
LEK_E.U10.	E.U10.	<p>Identify the most common symptoms of disease in children, apply diagnostic tests and interpret their results, conduct differential diagnosis, implement therapy, monitor treatment effects, and assess indications for specialist consultation, particularly in the case of symptoms such as:</p> <ul style="list-style-type: none"> <li>1. Fever;</li> <li>2. Cough and expectoration;</li> </ul>	P7U_U	P7S_UW

		<ul style="list-style-type: none"> <li>3. Shortness of breath;</li> <li>4. Nasal and aural discharge;</li> <li>5. Urinary disorders;</li> <li>6. Rash;</li> <li>7. Anemia;</li> <li>8. Eating disorders;</li> <li>9. Growth disturbances;</li> <li>10. Seizures and consciousness disorders;</li> <li>11. Heart palpitations;</li> <li>12. Fainting;</li> <li>13. Musculoskeletal pain;</li> <li>14. Swelling;</li> <li>15. Lymphadenopathy;</li> <li>16. Abdominal pain;</li> <li>17. Constipation and diarrhea;</li> <li>18. Presence of blood in stool;</li> <li>19. Dehydration;</li> <li>20. Jaundice;</li> <li>21. Cyanosis;</li> <li>22. Headache;</li> <li>23. Red eye syndrome</li> </ul>		
LEK_E.U11.	E.U11.	Recognize symptoms of addiction and propose appropriate medical management;	P7U_U	P7S_UW
LEK_E.U12.	E.U12.	Identify conditions requiring hospital treatment;	P7U_U	P7S_UW
LEK_E.U13.	E.U13.	Qualify patients for protective vaccinations;	P7U_U	P7S_UW
LEK_E.U14.	E.U14.	<p>Perform medical procedures and treatments, including:</p> <ul style="list-style-type: none"> <li>1. Measurement and assessment of basic life functions (temperature, pulse, blood pressure) and monitoring them using a cardiac monitor and pulse oximeter;</li> <li>2. Various forms of inhalation therapy and selecting an inhaler appropriate for the patient's clinical condition;</li> <li>3. Measurement of peak expiratory flow;</li> <li>4. Oxygen therapy using non-invasive methods;</li> <li>5. Instrumental and non-instrumental airway clearance</li> <li>6. Intravenous, intramuscular, and subcutaneous drug administration;</li> <li>7. Collection and securing of blood for laboratory and microbiological testing;</li> <li>8. Collection of arterial and arterialized capillary blood;</li> <li>9. Collection of swabs for microbiological and cytological examinations;</li> <li>10. Urinary catheterization in both females and males;</li> <li>11. Placement of a nasogastric tube;</li> </ul>	P7U_U	P7S_UW

		<p>12. Administration of an enema;</p> <p>13. Performing a standard resting electrocardiogram and interpreting its results;</p> <p>14. Defibrillation, electrical cardioversion, and external pacing;</p> <p>15. Strip tests, including measuring glucose levels using a glucometer;</p> <p>16. Pleural procedures: thoracentesis and pneumothorax decompression;</p> <p>17. Anterior nasal packing;</p> <p>18. Ultrasound examination in life-threatening situations according to the FAST protocol (Focused Assessment with Sonography in Trauma) or its equivalent, and interpreting its results;</p>		
LEK_E.U15.	E.U15.	Use of appropriate personal protective equipment according to the clinical situation;	P7U_U	P7S_UW
LEK_E.U16.	E.U16.	Pronounce patient death;	P7U_U	P7S_UW
LEK_E.U17.	E.U17.	Participate in the process of dignified dying of a patient, utilizing the potential of palliative care;	P7U_U	P7S_UW
LEK_E.U18.	E.U18.	Maintain patient medical records, including electronic formats, in compliance with legal regulations;	P7U_U	P7S_UW
LEK_E.U19.	E.U19.	Plan diagnostic, therapeutic, and preventive approaches in cancer treatment based on test results and provided medical documentation;	P7U_U	P7S_UW
LEK_E.U20.	E.U20.	Provide health services using available teleinformatics systems or communication systems used in healthcare;	P7U_U	P7S_UW
LEK_E.U21.	E.U21.	Conduct patient health education, including nutritional education tailored to individual needs;	P7U_U	P7S_UK
LEK_E.U22.	E.U22.	Apply rational antibiotic therapy depending on the patient's clinical condition;	P7U_U	P7S_UW
LEK_E.U23.	E.U23.	Conduct patient conversations following a structured dialogue framework (initiating the conversation, gathering information, explaining and planning, concluding the conversation), while structuring such discussions and developing relationships with patients using selected models (e.g., Calgary-Cambridge guidelines, Segue framework, Kalamazoo Consensus, Maastricht Maas Global), including through electronic communication means;	P7U_U	P7S_UK
LEK_E.U24.	E.U24.	Collect patient history with a focus on the presence of suicidal thoughts, when it is justified;	P7U_U	P7S_UW
LEK_E.U25.	E.U25.	Communicate information to patients, tailoring the amount and content to the patient's needs and capabilities, and supplement verbal information with models and written materials, including diagrams and instructions, and apply them appropriately;	P7U_U	P7S_UK
LEK_E.U26.	E.U26.	Jointly make diagnostic and therapeutic decisions with patients (assess the patient's level of involvement, their needs and capabilities in this regard, encourage the patient to take an active part in the decision-making process, discuss the advantages, disadvantages, expected outcomes, and consequences of decisions) and obtain informed consent from the patient;	P7U_U	P7S_UK
LEK_E.U27.	E.U27.	Communicate with patients from economically or socially marginalized groups, respecting their dignity;	P7U_U	P7S_UK
LEK_E.U28.	E.U28.	Identify social determinants of health, indicators of unhealthy and self-destructive behaviors, discuss these with the patient, and make a note in the medical documentation;	P7U_U	P7S_UW
LEK_E.U29.	E.U29.	Identify potential indicators of violence, collect history to verify if there is a risk of the patient experiencing violence, and make a note in the medical documentation;	P7U_U	P7S_UW
LEK_E.U30.	E.U30.	Apply principles of providing feedback (constructive, non-judgmental, descriptive) within team collaboration;	P7U_U	P7S_UO
LEK_E.U31.	E.U31.	Accept, clarify, and analyze one's own role and scope of responsibility in the team, and recognize one's role as a doctor in the team;	P7U_U	P7S_UO

LEK_E.U32.	E.U32.	Obtain information from team members respecting their diverse opinions and specialized competencies, and incorporate this information into the patient's diagnostic and therapeutic plan;	P7U_U	P7S_UO
LEK_E.U33.	E.U33.	Discuss patient situations in the team without subjective judgments, respecting patient dignity	P7U_U	P7S_UO
LEK_E.U34.	E.U34.	The following protocols should be applied (e.g., during the handover of patient care, ordering a patient consultation, or providing one): 1. ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury suspected), S (Symptoms/Signs), T (Treatment/Time to arrival)); 2. RSVP/ISBAR (R (Reason for the call), S (Story of the patient), V (Vital signs), P (Plan for the patient)/I (Introduction), S (Situation), B (Background), A (Assessment), R (Recommendation))."	P7U_U	P7S_UW
LEK_F.U1.	F.U1.	Perform surgical handwashing, apply sterile gloves, dress for surgery or a procedure requiring asepsis, prepare the surgical field in accordance with the principles of asepsis, and participate in a surgical procedure;	P7U_U	P7S_UW
LEK_F.U2.	F.U2.	Apply and change a sterile dressing;	P7U_U	P7S_UW
LEK_F.U3.	F.U3.	Assess and manage a simple wound, including local anesthesia (topical, infiltration), apply and remove surgical sutures, and apply and change a sterile surgical dressing;	P7U_U	P7S_UW
LEK_F.U4.	F.U4.	Recognize the most common life-threatening conditions, including using various imaging techniques;	P7U_U	P7S_UW
LEK_F.U5.	F.U5.	Identify the most common types of fractures, particularly in long bones, based on radiological examination;	P7U_U	P7S_UW
LEK_F.U6.	F.U6.	Temporarily immobilize a limb, including choosing the type of immobilization in typical clinical situations and checking the correctness of limb perfusion after applying an immobilizing dressing;	P7U_U	P7S_UW
LEK_F.U7.	F.U7.	Immobilize the cervical and thoracolumbar spine after injury;	P7U_U	P7S_UW
LEK_F.U8.	F.U8.	Manage external bleeding;	P7U_U	P7S_UW
LEK_F.U9.	F.U9.	Perform basic resuscitation procedures (Basic Life Support, BLS) in newborns and children, in accordance with the guidelines of the European Resuscitation Council (ERC);	P7U_U	P7S_UW
LEK_F.U10.	F.U10.	Conduct advanced resuscitation procedures for newborns (Newborn Life Support, NLS) and children (Pediatric Advanced Life Support, PALS), in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_F.U11.	F.U11.	Perform basic life support (BLS) procedures in adults, including the use of an automated external defibrillator, in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_F.U12.	F.U12.	Conduct advanced life support (ALS) procedures in adults, in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_F.U13.	F.U13.	Apply proper medical management during physiological pregnancy and postpartum according to the standards of perinatal care;	P7U_U	P7S_UW
LEK_F.U14.	F.U14.	Recognize the most common symptoms indicating abnormal progression of pregnancy and postpartum, apply and interpret diagnostic tests, conduct differential diagnosis, implement therapy, monitor treatment effects, and assess indications for specialist consultation, particularly in the case of abdominal pain, uterine contractions, vaginal bleeding, abnormal fetal heart rate and movement, and hypertension;	P7U_U	P7S_UW
LEK_F.U15.	F.U15.	Perform detection and interpretation of fetal heart activity;	P7U_U	P7S_UW
LEK_F.U16.	F.U16.	Recognize the onset of labor and symptoms of abnormal labor progression;	P7U_U	P7S_UW
LEK_F.U17.	F.U17.	Assist in physiological childbirth;	P7U_U	P7S_UW

LEK_F.U18.	F.U18.	Apply proper medical management in cases of abnormal vaginal bleeding, amenorrhea, pelvic pain (pelvic inflammatory disease, ectopic pregnancy), vaginitis and vulvitis, and sexually transmitted diseases;	P7U_U	P7S_UW
LEK_F.U19.	F.U19.	Apply proper medical management in the field of birth control;	P7U_U	P7S_UW
LEK_F.U20.	F.U20.	Recognize ophthalmic conditions requiring urgent specialist care and provide initial pre-hospital assistance in cases of physical and chemical eye injuries;	P7U_U	P7S_UW
LEK_F.U21.	F.U21.	Effectively deliver unfavorable news using selected protocols, such as: 1. SPIKES: <ul style="list-style-type: none"> <li>• S (Setting - proper environment),</li> <li>• P (Perception - understanding the knowledge level of the interlocutor),</li> <li>• I (Invitation/Information - invitation to discuss/informing),</li> <li>• K (Knowledge - delivery of the unfavorable news),</li> <li>• E (Emotions and empathy - addressing emotions and demonstrating empathy),</li> <li>• S (Strategy and summary - planning and summarizing),</li> </ul> 2. EMPATHY: <ul style="list-style-type: none"> <li>• E (Emotions),</li> <li>• M (Place),</li> <li>• P (Patient's perspective),</li> <li>• A (Appropriate language),</li> <li>• T (Message content),</li> <li>• I (Additional information),</li> <li>• A (Annotation in documentation),</li> </ul> 3. ABCDE: <ul style="list-style-type: none"> <li>• A (Advance preparation - preparing for the conversation),</li> <li>• B (Build a therapeutic environment - establishing a good connection with the family),</li> <li>• C (Communicate well - delivering bad news, considering communication principles),</li> <li>• D (Dealing with reactions - managing difficult emotions),</li> <li>• E (Encourage and validate emotions - right to show emotions, redirecting them and responding appropriately, aiming to conclude the meeting),</li> </ul> - including supporting the family in the process of dignified dying of the patient and informing the family about the patient's death;	P7U_U	P7S_UK
LEK_F.U22.	F.U22.	Seek and incorporate opinions and specialized competencies into the diagnostic and therapeutic plan for the patient, and also apply ATMIST and RSVP/ISBAR protocols;	P7U_U	P7S_UK
LEK_G.U1.	G.U1.	Describe the demographic structure of the population and, based on this, assess and predict health problems of the population;	P7U_U	P7S_UW
LEK_G.U2.	G.U2.	Collect information about the determinants and presence of risk factors for infectious and non-infectious diseases and plan preventive actions at various levels of prevention;	P7U_U	P7S_UW

LEK_G.U3.	G.U3.	Interpret positive and negative health indicators;	P7U_U	P7S_UW
LEK_G.U4.	G.U4.	Assess the epidemiological situation of infectious and non-infectious diseases in the Republic of Poland and worldwide;	P7U_U	P7S_UW
LEK_G.U5.	G.U5.	Explain to healthcare recipients their basic rights and the legal basis for providing these services;	P7U_U	P7S_UK
LEK_G.U6.	G.U6.	Issue medical certificates and reports, prepare opinions for patients, authorized bodies, and entities, maintain and manage medical documentation (in electronic and paper form), and utilize information and communication tools and services in healthcare (e-health);	P7U_U	P7S_UW
LEK_G.U7.	G.U7.	Recognize during patient examination behaviors and symptoms indicating the possibility of violence;	P7U_U	P7S_UW
LEK_G.U8.	G.U8.	Act in a way that avoids medical errors and ensures the quality of healthcare and patient safety, and critically analyze medical errors and adverse events;	P7U_U	P7S_UW
LEK_G.U9.	G.U9.	Collect blood for toxicological tests and secure material for hemogenetic studies;	P7U_U	P7S_UW
LEK_G.U10.	G.U10.	Organize the work environment in a way that ensures the safety of the patient and other people, taking into account the influence of human factors and ergonomic principles;	P7U_U	P7S_UO
LEK_G.U11.	G.U11.	Determine the possibility of using new treatments for a given patient based on current clinical trial results;	P7U_U	P7S_UW
LEK_H.U1.	H.U1.	Perform measurement and assessment of basic vital functions (temperature, pulse, blood pressure) and monitor them using a cardiomonitor and pulse oximeter;	P7U_U	P7S_UW
LEK_H.U2.	H.U2.	Perform instrument-free and instrumental airway clearance;	P7U_U	P7S_UW
LEK_H.U3.	H.U3.	Measure peak expiratory flow rate;	P7U_U	P7S_UW
LEK_H.U4.	H.U4.	Collect and secure blood and other biological material for laboratory, including microbiological, tests;	P7U_U	P7S_UW
LEK_H.U5.	H.U5.	Administer drugs intravenously, intramuscularly, and subcutaneously;	P7U_U	P7S_UW
LEK_H.U6.	H.U6.	Perform various forms of inhalation therapy and select an inhaler appropriately for the clinical situation;	P7U_U	P7S_UW
LEK_H.U7.	H.U7.	Collect arterial and arterialized capillary blood;	P7U_U	P7S_UW
LEK_H.U8.	H.U8.	Perform strip tests, including glucose measurement using a glucometer;	P7U_U	P7S_UW
LEK_H.U9.	H.U9.	Collect swabs for microbiological and cytological examinations;	P7U_U	P7S_UW
LEK_H.U10.	H.U10.	Perform urinary bladder catheterization in both females and males;	P7U_U	P7S_UW
LEK_H.U11.	H.U11.	Place a gastric tube;	P7U_U	P7S_UW
LEK_H.U12.	H.U12.	Perform rectal enema;	P7U_U	P7S_UW
LEK_H.U13.	H.U13.	Perform pleural procedures: puncture and relieve pneumothorax;	P7U_U	P7S_UW
LEK_H.U14.	H.U14.	Perform a standard resting electrocardiogram and interpret its results;	P7U_U	P7S_UW
LEK_H.U15.	H.U15.	Perform defibrillation, electrical cardioversion, and external pacing;	P7U_U	P7S_UW
LEK_H.U16.	H.U16.	Perform surgical handwashing, apply sterile gloves, dress for surgery or a procedure requiring asepsis, prepare the surgical field according to asepsis principles, and participate in a surgical procedure;	P7U_U	P7S_UW
LEK_H.U17.	H.U17.	Apply and change a sterile dressing;	P7U_U	P7S_UW
LEK_H.U18.	H.U18.	Assess and manage a simple wound, including local anesthesia (topical, infiltration), apply and remove surgical sutures, and apply and change a sterile surgical dressing;	P7U_U	P7S_UW
LEK_H.U19.	H.U19.	Manage external bleeding;	P7U_U	P7S_UW

LEK_H.U20.	H.U20.	Temporarily immobilize a limb, including selecting the type of immobilization in typical clinical situations and checking the correctness of limb perfusion after applying an immobilizing dressing;	P7U_U	P7S_UW
LEK_H.U21.	H.U21.	Immobilize the cervical and thoracolumbar spine after an injury;	P7U_U	P7S_UW
LEK_H.U22.	H.U22.	Perform anterior nasal packing;	P7U_U	P7S_UW
LEK_H.U23.	H.U23.	Perform an ultrasound examination in life-threatening conditions according to the FAST protocol or its equivalent and interpret its results;	P7U_U	P7S_UW
LEK_H.U24.	H.U24.	Use personal protective equipment appropriate to the clinical situation;	P7U_U	P7S_UW
LEK_H.U25.	H.U25.	Take a history from an adult, including an elderly person, using skills related to content, process, and perception of communication, considering both a biomedical perspective and the patient's perspective;	P7U_U	P7S_UK
LEK_H.U26.	H.U26.	Take a history from a child and their caregivers, using skills related to content, process, and perception of communication, considering both a biomedical perspective and the patient's perspective;	P7U_U	P7S_UK
LEK_H.U27.	H.U27.	Take a history in a health and life-threatening situation using the SAMPLE scheme;	P7U_U	P7S_UK
LEK_H.U28.	H.U28.	Conduct a comprehensive and focused physical examination of an adult tailored to a specific clinical situation;	P7U_U	P7S_UW
LEK_H.U29.	H.U29.	Conduct a comprehensive and focused physical examination of a child from the newborn to adolescent period tailored to a specific clinical situation;	P7U_U	P7S_UW
LEK_H.U30.	H.U30.	Deliver unfavorable news using a chosen protocol (e.g., SPIKES, EMPATHY, ABCDE), including supporting the family in the process of dignified dying of the patient and informing the family about the patient's death;	P7U_U	P7S_UW
LEK_H.U31.	H.U31.	Obtain information from team members with respect for their diverse opinions and specialized competencies, incorporate this information into the patient's diagnostic and therapeutic plan, and use ATMIST and RSVP/ISBAR protocols;	P7U_U	P7S_UO
LEK_H.U32.	H.U32.	Perform a psychiatric evaluation of a patient and assess their mental state;	P7U_U	P7S_UW
LEK_H.U33.	H.U33.	Confirm a patient's death;	P7U_U	P7S_UW
LEK_H.U34.	H.U34.	Conduct screening examinations, including comparing anthropometric measurements and blood pressure data with percentile charts and assessing the degree of maturation;	P7U_U	P7S_UW
LEK_H.U35.	H.U35.	Qualify a patient for protective vaccinations;	P7U_U	P7S_UW
LEK_H.U36.	H.U36.	Perform oxygen therapy using non-invasive methods;	P7U_U	P7S_UW
LEK_H.U37.	H.U37.	Conduct basic life support (BLS) procedures for newborns and children in accordance with the European Resuscitation Council (ERC) guidelines;	P7U_U	P7S_UW
LEK_H.U38.	H.U38.	Conduct advanced resuscitation procedures for newborns (Newborn Life Support, NLS) and children (Pediatric Advanced Life Support, PALS) in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_H.U39.	H.U39.	Conduct basic life support (BLS) procedures for adults, including using an automated external defibrillator, in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_H.U40.	H.U40.	Conduct advanced life support (ALS) procedures for adults in accordance with ERC guidelines;	P7U_U	P7S_UW
LEK_H.U41.	H.U41.	Recognize the most commonly occurring life-threatening conditions, including using various imaging techniques;	P7U_U	P7S_UW
LEK_H.U42.	H.U42.	Recognize ophthalmic conditions requiring urgent specialist care and provide initial pre-hospital assistance in cases of physical and chemical eye injuries;	P7U_U	P7S_UW



LEK_H.U43.	H.U43.	Perform detection and interpretation of fetal heart activity;	P7U_U	P7S_UW
LEK_H.U44.	H.U44.	Perform tasks while assisting in physiological childbirth.	P7U_U	P7S_UW

within the scope of **SOCIAL COMPETENCE**, the graduate is able to:

LEK_K.S1.	K.S1.	Establish and maintain deep and respectful contact with the patient and show understanding towards ideological and cultural differences;	P7U_K	P7S_KR
LEK_K.S2.	K.S2.	Do what is right for the patient;	P7U_K	P7S_KO
LEK_K.S3.	K.S3.	Respect medical confidentiality and patient's rights;	P7U_K	P7S_KO
LEK_K.S4.	K.S4.	Take actions concerning the patient on the basis of ethical principles, being aware of social conditions and restrictions resulting from illness;	P7U_K	P7S_KK
LEK_K.S5.	K.S5.	Recognize his/her own limitations and self-evaluate educational deficiencies and needs;	P7U_K	P7S_KK
LEK_K.S6.	K.S6.	Promote healthy lifestyle;	P7U_K	P7S_KO
LEK_K.S7.	K.S7.	Use reliable information sources;	P7U_K	P7S_KK
LEK_K.S8.	K.S8.	Conclude on the basis of own surveys and observations;	P7U_K	P7S_KK
LEK_K.S9.	K.S9.	Introduce rules of social conduct and teamwork to the group of specialists, including specialists from other medical professions also in the multicultural and multinational environment;	P7U_K	P7S_KR
LEK_K.S10.	K.S10.	Give opinions concerning various aspects of professional activity;	P7U_K	P7S_KR
LEK_K.S11.	K.S11.	Take responsibility for own decisions made during professional activities including own safety and safety of other people.	P7U_K	P7S_KR

1. Ordinance of the Minister of Science and Higher Education of 26th July 2019 concerning standards of education preparing for the profession of a doctor, dentist, pharmacist, nurse, midwife, laboratory diagnostician, physiotherapist and paramedic (Journal of Laws No. 2021, item 755, as amended).
2. Announcement of the Speaker of the Sejm of the Republic of Poland of 25th October 2018 on the consolidated text of the Act on the Integrated Qualifications System.
3. Ordinance of the Ministry of Science and Higher Education of 14th November 2018 on the secondary characteristics of learning outcomes for qualifications at levels 6-7 of the Polish Qualifications Framework.

### 13. COURSES WITH ECTS POINTS ASSIGNED TO THEM, LEARNING OUTCOMES AND CONTENTS:

Courses		Minimum ECTS points	Course content	Reference to the learning outcomes of the field
<b>BASIC / DIRECTIONAL COURSES:</b>				
<b>A. Morphological Sciences</b>		<b>26</b>		
1.	Anatomy	14	Anatomical structure and nomenclature of the skeletal, muscular, nervous, circulatory, respiratory, digestive, reproductive, urinary, endocrine systems, sense organs and	A.W1. A.U3. A.U4.

			integumentary system. The structure of the human body in the topographic aspect and topographic relations between individual organs. Assessment of the state of individual human functional systems in various clinical situations. Human topographic anatomy in medical diagnostic and therapeutic procedures. Shaping the appropriate ethical attitude towards the body of the living and the dead. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
2.	Histology and cell ultrastructure	9	Principles of basic research methods used in histology and embryology. Division of human body tissues, their origin and functions as well as histological structure of individual systems. Basic knowledge of embryology with particular emphasis on histogenesis and organogenesis. Basic laboratory techniques in the study of cellular and tissue materials. Tissue structure and their morphological diversity in strict relation to their functions. Analysis of cell structure at the level of light and electron microscopy and identification of subcellular structures using modern techniques. Construction of the light optical microscope and microscope adjustment. Histological structure of systems and organs with particular emphasis on those morphological elements that form the basis of their functions. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	A.W1. A.W2. A.W3. A.U1. A.U1. A U2. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
3.	Embriology	3	Principles of basic research methods used in embryology. Basic knowledge of embryology with particular emphasis on histogenesis and organogenesis. Adherence to ethical principles resulting from the practice of the medical profession. Demonstrates motivation to deepen knowledge.	A.W4. A U2. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>B. Scientific basis of medicine</b>		<b>35</b>		
1.	Biophysics	4	Physical foundations of mechanisms governing physiological processes in living organisms and the functioning of organs and organ systems of the human body. Physical laws describing flows of: electricity, liquids and factors affecting resistances; electrical, vascular. Natural and artificial sources of ionizing radiation and its interaction with matter. Physicochemical and molecular basics of sensory organs functioning. Physical foundations of non-invasive imaging methods. Physical foundations of selected therapeutic techniques. Telemedicine as a tool to support the doctor's work. Harmfulness of ionizing radiation dose and compliance with radiation protection principles. Planning and conducting basic physical measurements in medical research and developing results. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	B.W4. B.W5. B.W6. B.W7. B.W8. B.W25. B.U1. B.U2. B.U8. B.U10. B.U11. B.U12. K.S5.

				K.S7. K.S8. K.S9. K.S10. K.S11.
2.	Molecular Biology	4	<p>Primary, secondary, tertiary and quaternary structures of proteins and post-translational and functional modifications of proteins and their significance. Nucleotide functions in the cell, primary and secondary structures of DNA and RNA and chromatin structure. Human genome, transcriptome and proteome functions and methods used in their study, DNA replication, repair and recombination processes, transcription and translation, and degradation of DNA, RNA and proteins, as well as concepts of gene expression regulation. Diagnostic methods including the study of proteins and nucleic acids. Molecular basis of diseases.</p>	B.W10. B.W11. B.W12. B.W14. B.W15. B.U6. B.U8. B.U12. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
3.	Cythophysiology	5	<p>Methods of communication between cells, as well as between the cell and the extracellular matrix, as well as signalling pathways in the cell and examples of disorders in these processes leading to the development of cancer and other diseases. Processes such as: cell cycle, proliferation, cell differentiation and ageing, apoptosis and necrosis, and their importance for the functioning of the body. The basic scope of stem cell issues and their use in medicine. Fundamentals of excitation and conduction in the nervous system and higher nervous function, and the physiology of striated and smooth muscles; Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge</p>	A.W2. B.W9. B.W10. B.W11. B.W16. B.W17. B.W18. B.W19. B.U11. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.

4.	Biochemistry	4	<p>Acid-base balance and the mechanism of buffer action and their importance in systemic homeostasis. The concept of solubility, osmotic pressure, Basic reactions of inorganic and organic compounds in aqueous solutions. Structure of simple organic compounds contained in macromolecules present in cells, extracellular matrix and body fluids. Structure and functioning of lipids, proteins and polysaccharides and their functions in cellular and extracellular structures. Basic catabolic and anabolic pathways and methods of their regulation as well as their determinants. Metabolic profiles of basic organs and systems. The effect of stress on cells and its importance in the pathogenesis of diseases and in ageing processes. Selected biochemical analyses. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>B.W1. B.W2. B.W3. B.W9. B.W10. B.W11. B.W13. B.W14. B.W15. B.W26. B.U3. B.U4. B.U5. B.U6. B.U8. B.U10. B.U11. B.U12. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
5.	Physiology with elements of clinical physiology	9	<p>Basics of general human physiology including basic aspects of cell physiology. General concepts and principles of functioning of all systems and organs of the human body. Oxidative potential of the body and oxidative stress. Enzymes involved in digestion, the mechanism of hydrochloric acid production in the stomach, the role of bile, the course of absorption of digestive products and related disorders. The consequences of improper nutrition. Cell cycle, proliferation, cell differentiation and ageing, apoptosis and necrosis and their role in functioning. Stem cells issues and their use in medicine. The mechanism of ageing of the human body. Quantitative parameters describing the efficiency of individual systems and organs. The relationship between factors disturbing the balance of biological processes and physiological and pathophysiological changes. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>B.W6. B.W20. B.W21. B.W22. B.W26. C.W4. C.W38. C.W39. C.W40. A.U1. B.U7. B.U8. B.U12. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.</p>

6.	First aid with elements of nursing	6	Basics of first aid and performing basic medical procedures and treatments. Current guidelines for cardiopulmonary resuscitation of newborns, children and adults. Basic resuscitation procedures with the use of an automatic external defibrillator and other rescue operations and giving first aid. Assessment of the unconscious patient's condition. Dressing wounds and temporary limb immobilization. Symptoms of increased intracranial pressure. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	F.W9. E.U14. F.U1. F.U6. F.U7. F.U8. F.U9. F.U11. F.U12. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
7.	Methodology of scientific research with elements of biostatistics in medicine	3	Basics of evidence-based medicine. The principles of clinical practice strategy based on scientific evidence and the use of research results in medical practice. Causes, symptoms, principles of diagnosis and therapeutic treatment in the most common diseases and specific problems in a family doctor's practice. Principles of conducting scientific, observational and experimental research as well as in vitro studies for the development of medicine. Basic computer and biostatistical methods used in medicine, including medical databases, spreadsheets and basics of computer graphics. Basic statistical analysis methods used in population and diagnostic studies. Possibilities of modern telemedicine as a tool to support the work of a doctor. Searching for information in medical databases, using selected statistical methods using a program supporting statistical calculations and the ability to cooperate in a group in the implementation of a project. Shaping awareness of the importance of research and scientific reports in clinical decision making and medical professionalism. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	B.W23. B.W24. B.W25. B.W26. D.W19. B.U8. B.U9. B.U10. B.U11. D.U4. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>C. Preclinical sciences</b>		<b>40</b>		
1.	Genetics	4	Basic concepts in genetics. Human genome, transcriptome and proteome functions and basic methods used in their study; describes processes of DNA replication, repair and recombination, transcription and translation as well as degradation of DNA, RNA and protein. Gene expression regulation concepts. Correct human karyotype and different types of sex determination. The structure of chromosomes and the molecular basis of mutagenesis. Genetic conditions of human blood groups and Rh incompatibility in the system. Autosome and heterosome aberrations that cause diseases, including cancers (oncogenesis). Factors affecting the primary and secondary genetic equilibrium of the population. Fundamentals of diagnostics of gene and chromosomal mutations responsible for inherited and acquired diseases, including cancer. Benefits and threats resulting from the presence of genetically modified organisms (GMO) in the ecosystem. Genetic	C.W1. C.W2. C.W3. C.W4. C.W5. C.W6. C.W7. C.W8. C.W9. C.W22. E.W36.

			mechanisms of drug resistance acquisition by microorganisms and cancer cells. Clinical symptoms and genetic liabilities of selected diseases. Diagnostics principles of genetic diseases in humans. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	C.U1. C.U2. C.U3. C.U4. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
2.	Microbiology with parasitology	9	Classification of microorganisms including pathogenic and microbial flora. Epidemiology of virus, bacterial and fungal and parasite infections, taking into account geographical range of their occurrence. The influence of abiotic and biotic environmental factors on the human body and the human population, and the ways of their penetration into the human body. Consequences of exposure of the human body to various chemical and biological agents, and the principles of prevention. Symptoms of iatrogenic infections, their pathways and pathogens causing changes in individual organs. Basics of microbiological and parasitological diagnostics. Basics of disinfection, sterilization and aseptic treatment. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge. Basic concepts in parasitology and epidemiology of parasitic infections, taking into account geographical range of their occurrence. Anatomical and morphological structure of selected parasites and the role and the importance of parasites for animals and humans. Invasive forms of parasites for humans, including their morphology and systematics. The principle of functioning of the parasite - host system and the basic disease symptoms caused by parasites. Basics of microbiological and parasitological diagnostics. Principles for taking and storing material for parasite testing. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge	C.W10. C.W11. C.W12. C.W13. C.W14. C.W15. C.W17. C.W32. E.W33. A.U1. C.U5. C.U6. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
3.	Immunology	3	Structure and functions of the immune system. Basics of development and mechanisms of the immune system functioning, including specific and non-specific mechanisms of humoral and cellular immunity. Types of immune response. The structure and role of the major HLA histocompatibility system. Major histocompatibility system. Types of hypersensitivity reactions, types of immunodeficiencies and basics of immunomodulation. Immunology of neonatal and paediatric period. Anti-infectious immunity. Active and passive immunoprophylaxis. Primary and secondary immunodeficiencies. Issues in the field of cancer immunology. Genetic basics of donor and recipient selection and basics of transplant immunology. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	C.W4. C.W16. C.W18. C.W19. C.W20. C.W21. C.W22. C.W42. C.W43. C.U2. K.S5. K.S7.

				K.S8. K.S9. K.S10. K.S11.
4.	Pathology	8	Basic mechanisms of cell and tissue damage. Clinical course of specific and non-specific inflammation and regeneration processes of tissues and organs. Pathophysiology of shock, with particular emphasis on the differentiation of the causes of shock and multisystem organ failure. Aetiology of haemodynamic disorders, regressive and progressive changes. Issues in the field of detailed organ pathology, macro- and microscopic images and the clinical course of pathomorphological changes in individual organs. Consequences of developing pathological changes for topographically adjacent organs. External and internal pathogens, modifiable and non-modifiable. Clinical forms of the most common diseases of individual systems and organs, metabolic diseases and disorders of water-electrolyte and acid-base balance. The relationship between the patient, clinician and pathologist. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	C.W23. C.W24. C.W25. C.W26. A.U1. A.U2. C.U7. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
5.	Pharmacology with toxicology	8	Basic principles of pharmacodynamics, pharmacokinetics, pharmacoeconomics, pharmacogenetics. Genetic mechanisms of drug resistance acquisition by microorganisms and cancer cells as well as the problem of drug resistance, including multi-drug resistance. Mechanisms of drugs effect and their changes in the body depending on age. Impact of disease processes on metabolism and elimination of drugs. Adverse drug reactions, including those resulting from their interactions. Groups of drugs, the abuse of which can lead to intoxication and the basic principles of diagnostic procedure in poisoning. Interpretation of toxicological test results. Verification of drug information sources and evaluation of medical publications. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	C.W9. C.W28. C.W29. C.W30. C.W31. C.W32. C.W33. C.W34. C.W35. C.W36. C.W37. C.W38. C.U8. C.U9. C.U10. C.U11. C.U12. C.U13. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.

6.	Hospital-acquired infections	2	Epidemiology of infections caused by bacteria and viruses, which are the most common etiological factors of nosocomial infections. Risk factors for infection. Rules of conduct in case of an outbreak. Principles of commissioning and interpretation of microbiological screening test results. Species of bacteria, viruses and fungi which are the most common etiological factors of infections. Possibilities of supervision and control of nosocomial infections, with special attention paid to infections caused by multi-resistant strains. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	C.W10. C.W11. C.W12. C.W13. C.W14. C.W15. C.W16. C.W17. C.U6. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
7.	Pathophysiology	6	Basic terms used in pathophysiology. Functional changes in the organism in a disease. Mechanisms of disease development and systemic consequences resulting from the disease. Fundamentals of etiopathogenesis of diseases of individual systems and the pathomechanism of consequences of disturbed function of organs and systems of human organisms. Symptoms of the most common acute poisoning, including alcohol, drugs and other psychoactive substances, heavy metals and selected groups of medicaments. Pathophysiological phenomena occurring in individual organs and systems with the ability to link individual pathomechanisms accompanying various diseases. Changes in the human body under the influence of ageing. Consequences of improper nutrition, including prolonged starvation, too big meals, and an unbalanced diet; deficiency of vitamins or minerals and their excess in the body. Mechanism of hormone functioning and consequences of hormonal imbalance. Autosomal and heterosomal aberrations that cause diseases, including cancers (oncogenesis). Fundamentals of diagnostics of gene and chromosomal mutations responsible for inherited and acquired diseases, including cancer. Clinical forms of the most common diseases of individual systems and organs, metabolic diseases and disorders of water- electrolyte and acid-base balance. Compliance with ethical principles arising from practicing medical profession. The student shows motivation to broaden his/her knowledge.	B.W21. C.W13. C.W26. C.W27. C.W39. C.W40. C.U7. K.S5. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>D. Behavioral and social sciences with elements of professionalism and communication, including the idea of humanism in medicine</b>		<b>22</b>		
1.	Medical sociology	2	The current state of knowledge about the social dimension of health and disease, the impact of the social environment. Theoretical basics in the field of general sociology and sociology of medicine in health behaviours, social approach to the analysis of the causes and consequences of a disease, disability, social pathologies and death in the context of the functioning of family, local environment and society. Forms of violence, models explaining	D.W1. D.W2. D.W5. D.W8. D.W9. D.W10.



			domestic and institutional violence, social conditions of various forms of violence, and the role of a doctor in recognizing it. Knowledge of the sociology of medical institutions and professions, in particular the creation of social relations between a doctor and a therapeutic team, a patient and his family. Shaping the sense of responsibility and commitment in shaping bonds and social behaviour favourable to health strengthening. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	D.W11. D.W13. E.U27. E.U28. K.S2. K.S3. K.S4. K.S6. K.S7.
2.	Medical psychology	2	The importance of verbal and non-verbal communication in the process of communication with patients and the concept of trust in interaction with the patient. Psychosocial consequences of hospitalization and a chronic disease. Basic psychological mechanisms of human functioning in health and disease. The issue of adaptation to the disease as a difficult situation, stages of adaptation to threatening events and the needs of the patients, dying and the process of mourning of the family. The role of stress in the etiopathogenesis and course of diseases as well as mechanisms of coping with stress. Rules for motivating patients to promote healthy behaviours and to inform about unfavourable prognosis. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	D.W3. D.W4. D.W6. D.W12. D.W14. D.U7. D.U8. D.U9. K.S2. K.S3. K.S4. K.S6. K.S7.
3.	Elements of professionalism with ethics	2	Issues of professionalism in medicine. Developing skills related to professional behaviour in which the good of the patient is a priority of individual doctor, professional group and medical institutions. Psychosocial consequences of hospitalization and a chronic disease. The role of stress in the etiopathogenesis and course of diseases as well as mechanisms of coping with stress. The rules for motivating patients to promote healthy behaviours and to inform about unfavourable prognosis. Doctor-patient cooperation models; duties and privileges of doctors and patients, social contract. Regulatory mechanisms: European Charter of Patients' Rights. Macro and micro skills in conducting medical record; verbal and non-verbal aspects of behaviour, skills leading to "opening up" of the patient. Basics of evidence-based medicine. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge. Current knowledge of ethics, deontology, bioethics and familiarization with contemporary moral problems in medicine. Preparation for medical practice based on skillful and justified application of values, principles and legal norms. Ethical knowledge that serves to shape the correct relationship between the doctor and the patient, one's own professional group and representatives of other medical professions. Principles of altruism and clinical responsibility and awareness of the principles of functioning of the therapeutic team. The student is able to establish a therapeutic relationship with the patient and his family. Adherence to ethical principles resulting from the practice of the medical profession. Demonstrates motivation to deepen knowledge.	D.W7. D.W10. D.W13. D.W15. D.W17. D.W16. D.W19. D.W20. D.U1. D.U2. D.U3. D.U4. D.U5. D.U7. D.U8. D.U9. K.S2. K.S3. K.S4. K.S6. K.S7.

4.	History of medicine	2	Presentation of the history of medical sciences in the socio-cultural aspect. Identification of conditions promoting or inhibiting the development of medicine Ethical attitudes of prominent representatives of medicine. The role of tradition in transferring medical knowledge and skills, among others in the aspect of intergenerational master-student relations. The role of multicultural and international university centres in the development of medicine. Analysis of medical literature, including in English, and drawing conclusions based on available literature. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	D.W18. D.U5. K.S2. K.S3. K.S4. K.S6. K.S7.
5.	Basic Polish	2	Using the skills of Polish language basics of grammar and communication in everyday life.	D.W7. D.U5. D.U6. K.S2. K.S3. K.S4. K.S6. K.S7.
6.	Polish for medicine	4	Improving and developing knowledge of lexical and grammatical structures in the field of medical sciences. Developing language competences for professional needs, in particular the ability to use medical literature and communication in a professional environment, including communication with the patient. Developing competence to critically assess knowledge. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	D.W7. D.U5. D.U6. K.S2. K.S3. K.S4. K.S6. K.S7.
7.	Polish communication skills for medicine	2	Improving the ability to communicate with the patient and the therapeutic team at the B2+ level of the Common European Framework of Reference for Languages.	D.W7. D.U5. D.U6. K.S2. K.S3. K.S4. K.S6. K.S7.

8.	Communication with the patient and his family	2	<p>Effective communication skills, improving self-presentation skills and building positive relationships. The importance of verbal and non-verbal communication in the process of communication with patients and the concept of trust in interaction with the patient. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>D.W7. D.W11. D.U10. D.U11. D.U12. D.U13. D.U14. K.S2. K.S3. K.S4. K.S6. K.S7.</p>
9.	Medical communication in clinical practice	3	<p>Development of soft skills with particular emphasis on communication skills in clinical situations. Learning and improving verbal and non-verbal communication techniques. Learning the rules and acquiring the skills of proper communication in the doctor-patient relationship, as well as shaping and strengthening a patient-centered attitude. Development of knowledge and skills in collecting and transmitting information and building motivation for treatment and compliance with medical recommendations. The student is ready to implement the principles of professional camaraderie and cooperation in a team, including with representatives of other medical professions, also in a multicultural and multinational environment. The student is able to establish a therapeutic relationship with the patient and his family and apply the principles of providing feedback. As part of cooperation in a team, the student is able to: assume, explain and analyze his own role and scope of responsibility in the team and recognize his role as a doctor in the team; obtain information from team members, respecting their diverse opinions and specialized competences as well as taking this information into account in the patient's diagnostic and therapeutic plan; discuss the patient's situation within the team, excluding subjective assessments, while respecting the patient's dignity. Compliance with ethical principles resulting from practicing the medical profession. The students demonstrates motivation to deepen knowledge.</p>	<p>D.W7. D.U1. D.U2. D.U3. D.U4. D.U7. D.U8. D.U9. D.U10. D.U11. D.U12. D.U13. D.U14. E.U1. E.U2. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4.</p>

				K.S6. K.S7. K.S9. K.S10. K.S11.
<b>E. Clinical Sciences - Non-surgical treatment</b>		<b>70</b>		
1.	Pediatrics	16	<p>Nutrition rules for healthy and sick children, preventive vaccinations and routine medical check-ups. Medical history and physical examination of a child. Qualifying the patient for home and hospital treatment. Basics of conditioning in the diagnosis and therapy of the most common children's diseases and secondary symptoms. Abused and sexually abused child. Mental disorders and their treatment in children and adolescents. Mental retardation in children. Behavioural disorders: psychosis, addictions, eating and excretion disorders in children. The most common life-threatening conditions in children and rules of conduct in these conditions. Causes, symptoms, principles of diagnosis and therapeutic procedure in the most common hereditary diseases. Analysis of the adverse reactions of individual drugs and their interactions in the treatment of the most common children's diseases. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	E.W1. E.W2. E.W3. E.W4. E.W5. E.W20. E.W36. E.W37. F.W10. C.U4. E.U2. E.U3. E.U6. E.U7. E.U8. E.U10. E.U11. E.U12. E.U13. E.U14. E.U15. E.U16. E.U18. E.U21. E.U22. E.U24. E.U25. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U34. F.U9. F.U10. K.S1. K.S2. K.S3. K.S4.

				K.S5 K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
2.	Nuclear medicine	1	<p>Radioisotope imaging techniques (dynamic scintigraphy, static scintigraphy, planar technique, SPECT, SPECT/CT, PET, PET/CT), elements of radiation protection (shielding, ALARA principle). Interdisciplinarity of nuclear medicine. Scintigraphic studies: skeletal system, kidney and urinary tract, respiratory system, gastrointestinal system, endocrine system, in cardiology, in the course of rheumatic diseases. . Radioisotope studies used in the diagnosis of neoplastic lesions. Indications and contraindications for examinations, radiopharmaceuticals used, techniques of performing examinations. Principles of treatment of pain by radioisotopic methods , including cancer pain and chronic pain. The student is able to establish a therapeutic relationship with the patient and his family. Can draw conclusions from measurements and observations. Can cooperate in an interdisciplinary team.</p>	E.W7. E.W29. E.U9. E.U15. E.U19. K.S1. K.S7. K.S8. K.S9.
3.	Internal Medicine-propaedeutics in internal medicine with elements of cardiology	3	<p>The content includes the symptomatology of internal system diseases and selected cardiology cases. Each case includes definition, pathophysiology, clinical picture, and diagnostic tests (ECG, echocardiography, stress tests, Holter ECG, ABPM, coronary angiography, electrophysiological examination, MRI, SPECT, MUGA, CT, PET, laboratory tests) and non-invasive and invasive treatment (including electrical heart stimulation, ICD, CRT, ablation). Medical history, physical examination of an adult patient, assessment of general condition, patient's state of consciousness and awareness. Physical examination of the patient. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	E.W7. E.W9. E.W36. F.W10 E.U1. E.U3. E.U5. E.U9. E.U16. E.U18. K.S1. K.S2. K.S3. K.S4. K.S5 K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.

4.	Internal Medicine	10	<p>The specificity of work in a hospital and a specialist outpatient clinic, principles of cooperation with other doctors and staff. The doctor-patient relationship taking into account the specifics of internal diseases, the role of support and family, special situations (e.g. incapacitated patient). Environmental and epidemiological conditions of the most common internal diseases. Causes, symptoms, principles of diagnosis and therapeutic procedure in relation to the most common internal diseases occurring in adults and their complications. Taking medical history from an adult patient; full and targeted physical examination of an adult patient; assessment of the general condition and the state of consciousness and awareness of the patient. Differential diagnosis of the most common adult diseases. Assessment and description of the patient's somatic and mental state. Immediate life-threatening conditions and the state after consumption of alcohol, drugs and other drugs. Planning diagnostic, therapeutic and preventive procedures. Analysis of possible adverse reactions of individual drugs and interactions between them. Patient's qualification for home and hospital treatment. Interpretation of laboratory tests and identification of the causes of deviations. Application of nutritional treatment. Qualification of the patient for vaccination. Taking material for tests used in laboratory diagnostics. Performing basic medical procedures and medical treatments. Assisting in carrying out some medical procedures and medical treatments. Planning specialist consultations. Monitoring the condition of the patient poisoned by chemical substances or drugs. Assessment of pressure sores and the use of appropriate dressings as well as insertion of peripheral intravenous line. Identifying the patient's agony and certifying his death. Shaping attitudes in relations: doctor-patient, doctor-therapeutic team and ethical attitudes in accordance with the principles of ethics. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W8. E.U1. E.U3. E.U4. E.U5. E.U9. E.U12. E.U13. E.U14. E.U15. E.U16. E.U17. E.U18. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	-------------------	----	--	---

5.	Geriatrics	4	<p>Causes and basic distinctions in the most common diseases occurring in the elderly and the rules of conduct in basic geriatric syndromes. Knowledge of the different course of disease processes in old age on the example of frailty syndrome, diseases of cardiovascular, respiratory, digestive, locomotor and endocrine systems. The course and symptoms of the ageing process, as well as the principles of holistic geriatric assessment and interdisciplinary care for an elderly patient. Basic principles of pharmacotherapy of elderly people's diseases. Risks associated with the hospitalization of elderly people. Basic rules for the organization of care for the elderly and the carer's burden. Specificity of mental disorders and their treatment in old age. The current state of the organization of care for the elderly in Poland. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W7. E.W9. E.W10. E.W11. E.W12. E.W13. E.W20. E.W25. E.W26. E.U1. E.U3. E.U5. E.U9. E.U12. E.U13. E.U14. E.U15. E.U16. E.U17. E.U18. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	------------	---	--	--

6.	Neurology	4	<p>Treatment of the most common neurological diseases; familiarizing with the principles medical history and physical examination of patients with nervous system diseases. Basic syndromes of neurological symptoms. Causes, symptoms, principles of diagnosis and therapeutic procedure in the most common diseases of the nervous system. Skills to observe and recognize the patient's neurological condition and interpret tests used in neurology: lumbar puncture, Doppler, CT, NMR, EEG and EMG. The specificity of work in neurological wards and shaping the right attitude towards people with neurological dysfunctions.</p> <p>The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W15. E.W16. E.W27. F.W10. F.W20. E.U1. E.U2. E.U3. E.U5. E.U6. E.U9. E.U10. E.U12. E.U15. E.U16. E.U17. E.U18. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	-----------	---	--	---



6.	Psychiatry	5	<p>Basic concepts of pathogenesis of mental disorders. General symptomatology of mental disorders and the principles of their classification according to the main classification systems. Symptoms, principles of diagnosis and therapeutic procedure in the most common mental illnesses. Principles of diagnostics and emergency procedures in psychiatry. Conducting full and targeted adult patient examination as well as psychiatric examination. Provisions regarding the protection of mental health, with particular regard to the rules of admission to a psychiatric hospital. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W4. E.W5. E.W7. E.W17. E.W18. E.W19. E.W20. E.W21. E.W22. E.W23. F.W10. E.U1. E.U2. E.U3. E.U7. E.U11. E.U12. E.U15. E.U16. E.U18. E.U20. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. G.U7. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	------------	---	---	--

7.	Oncology	4	<p>Environmental and epidemiological conditionings of the most common human diseases and cancers. Understanding the principles of cancer pain treatment. Basics of early cancer detection and principles of screening tests in oncology. Possibilities of modern cancer therapy, cell and gene therapy perspectives and their side effects. Principles of combination therapies in oncology, diagnostic and therapeutic algorithms in the most common human cancers. Principles of pain treatment, including cancer and chronic pain. Interpretation of laboratory tests and identification of the causes of deviations. The specificity of working with oncological patients. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>C.W41. C.W42. E.W3. E.W7. E.W14. E.W16. E.W24. E.W25. E.W27. F.W10. G.W21. G.W22. C.U2. E.U1. E.U3. E.U4. E.U12. E.U15. E.U16. E.U17. E.U18. E.U19. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	----------	---	---	--

8.	Family medicine	4	<p>The most common paediatric, adulthood, surgical, geriatric, as well as family and environmental issues in primary care. Causes, symptoms, principles of diagnosis and therapeutic treatment in the most common diseases and specific problems in a family doctor's practice. Ability to communicate properly with the patient and his family as well as creating and managing family doctor's practice. Work in the conditions of primary care centres and shaping the correct attitude of the doctor towards the patients under care. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W3. E.W7. E.W37. E.W38. E.U1. E.U2. E.U3. E.U8. E.U9. E.U10. E.U12. E.U13. E.U14. E.U15. E.U18. E.U20. E.U21. E.U22. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	-----------------	---	--	---

9.	Dermatology and venereology	4	<p>Symptomatology of the most common dermatological diseases and proper dermatological terminology. Medical history and physical examination for dermatological diseases and conclusions in the form of diagnosis, differentiation, additional tests and treatment. Etiopathogenesis, epidemiology, clinical picture, diagnostics and dermatological therapy of the most common infectious and non-infectious diseases of the skin, hair, nails and mucous membranes, benign and malignant neoplasm of skin, sexually transmitted diseases. Skin changes associated with diseases of internal organs and systemic diseases. Analysis of possible adverse reactions of individual drugs and interactions between them. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge</p>	<p>E.W3. E.W7. E.W35. E.U1. E.U2. E.U3. E.U9. E.U10. E.U12. E.U15. E.U18. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U18. K.S1. K.S2. K.S3. K.S4. K.S5 K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	-----------------------------	---	---	---

10.	Infectious diseases	3	<p>Epidemiology, diagnosis, treatment and prevention of infectious and parasitic diseases, with particular emphasis on hepatotropic virus infections, HIV infections and related opportunistic infections, as well as neuroinfections, tropical diseases, zoonoses, fever of unknown cause and vaccines and serums. Diagnosis of a disease of infectious etiology, knowledge on their etiopathogenesis and symptoms to the extent that allows differential diagnosis, establishing the final diagnosis and proposing initial empirical therapy, and after diagnosis - targeted therapy (including chemotherapy). Conducting a full and targeted physical examination of an adult patient and assessment of the general condition, state of consciousness and awareness of the patient. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>C.W16. E.W3. E.W31. E.W32. E.W33. E.W34. G.W3. G.W9. E.U1. E.U2. E.U3. E.U9. E.U10. E.U12. E.U13. E.U15. E.U16. E.U18. E.U20. E.U22. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
-----	---------------------	---	---	---

11.	Rehabilitation	4	<p>Issues of medical rehabilitation, learning its definitions, goals, methods and means as well as development history. Clinical examinations for the needs of rehabilitation, familiarization with the basic principles of comprehensive rehabilitation treatment programming. The issue of comprehensive rehabilitation of patients with locomotor dysfunctions, rehabilitation treatment of patients after acute trauma of the spine with neurological complications, rehabilitation treatment of patients after injuries of the locomotor system, comprehensive treatment improving the degenerative changes of the locomotor system and determination of its place in interdisciplinary proceedings (including surgical), conservative treatment of people with spinal diseases, rehabilitation in respiratory and cardiovascular diseases. The concept of disability. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W3. E.W7. E.W28. E.W29. E.W30. E.U1. E.U2. E.U3. E.U5. E.U6. E.U9. E.U10. E.U15. E.U18. E.U20. E.U21. E.U23. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
-----	----------------	---	--	---

12.	Laboratory diagnostics	3	<p>Theoretical and practical basics of laboratory diagnostics as well as microbiological and parasitological diagnostics. Principles of diagnostic procedure in poisoning. Types of biological materials used in laboratory diagnostics and principles of taking material for tests. Using basic laboratory techniques, such as: qualitative analysis, titration, colorimetry, pH measurement, chromatography, electrophoresis of proteins and nucleic acids. Indications for the implementation of monitored therapy. Possibilities and limitations of laboratory tests in emergency. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>B.W14.  C.W15.  C.W16.  C.W37.  E.W3.  E.W39.  E.W40.  B.U12.  C.U7.  E.U14.  E.U15.  E.U30.  E.U31.  E.U32.  E.U33.  E.U34.  K.S1.  K.S2.  K.S3.  K.S4.  K.S5.  K.S6.  K.S7.  K.S8.  K.S9.  K.S10.  K.S11.</p>
-----	------------------------	---	---	--

13.	Clinical pharmacology	5	<p>Basic principles of pharmacotherapy of elderly people's diseases. Possibilities of modern cancer therapy (including multimodal therapy), cell and gene therapy perspectives and their side effects. Principles of combination therapies in oncology, diagnostic and therapeutic algorithms in the most common human cancers. Indications for the implementation of monitored therapy. Individualisation of existing therapeutic guidelines and other methods of treatment against ineffectiveness or contraindications to standard therapy. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge. COVID-19 pharmacotherapy. SARS-Cov2 vaccines.</p>	<p>C.W9. C.W28. C.W29. C.W30. E.W8. E.W27. E.W41. E.W42. E.U18. E.U22. E.U26. E.U30. E.U31. E.U32. E.U33. E.U34. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<b>F. Clinical Sciences - Surgical treatment</b>		<b>55</b>		



1.	Anesthesiology and intensive care	5	<p>The most common life-threatening conditions in children and principles of conduct in these conditions. Principles of pain treatment, including cancer and chronic pain. Possibilities and limitations of laboratory tests in emergency. Perioperative safety principles, patient preparation for surgery, general and local anaesthesia, and controlled sedation. The student knows postoperative treatment with analgesic therapy and postoperative monitoring. Indications and rules for the use of intensive care; The student knows the current guidelines for cardiopulmonary resuscitation of newborns, children and adults. Causes, symptoms, principles of diagnosis and therapeutic procedure in the case of the most common central nervous system diseases. The basic issues of transplantology, indications for transplantation of irreversibly damaged organs and tissues, and related procedures. Rules for suspicion and recognition of brain death. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W27.  F.W6.  F.W7.  F.W8.  F.W9.  F.W10.  F.W13.  F.W14.  F.W.20.  F.W.21.  F.W.22.  F.W23.  E.U9.  E.U10.  E.U11.  E.U14.  E.U15.  E.U16.  E.U18.  E.U25.  E.U26.  E.U27.  E.U30.  E.U31.  E.U32.  E.U33.  E.U34.  F.U1.  F.U2.  F.U3.  F.U4.  F.U8.  F.U9.  F.U10.  F.U11.  F.U12.  F.U21.  F.U22.  K.S1.  K.S2.  K.S3.  K.S4.  K.S5.  K.S6.  K.S7.  K.S8.  K.S9.  K.S10.  K.S11.</p>
----	-----------------------------------	---	---	--

2.	General surgery	16	<p>Characteristics of the surgical ward and learning the principles of the doctor's work in the surgical ward as well as cooperation with the diagnostic laboratory, radiology laboratory, microbiology and endoscopic laboratory. Principles of preparing the patient for urgent and planned surgery. Knowledge about wound healing. Effect of injury on the body and treatment of shock. Basics of nutritional treatment in surgery. The most common injuries of head, neck, chest, abdominal cavity, limbs and their consequences. Basic knowledge about burns and frostbites and the principles of dressing such wounds and knowledge about acute surgical abdominal diseases: acute appendicitis, acute cholecystitis, gastrointestinal obstruction, perforation of gastric and duodenal ulcer, peritonitis, and gastrointestinal bleeding. Knowledge about the most common cancers: lung cancer, breast cancer, colorectal cancer, stomach cancer; hernias, pancreatic diseases, cholelithiasis, portal hypertension and its complications; endocrine diseases - diseases of the thyroid gland, adrenal glands, multiple endocrine neoplasms; most common peripheral circulatory system diseases: acute and chronic lower limb ischemia, abdominal aortic aneurysm, chronic venous insufficiency of lower extremities. Principles of surgical treatment of coronary artery disease and valvular heart disease. The most common complications of surgical treatment and the principles of their prevention. Principles of organ transplantation. Mastering the knowledge on metabolic surgery. Treatment of surgical infections. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>F.W1. F.W3. F.W4. F.W10. F.W13. F.W17. F.W21. F.W22. F.W23. E.U1. E.U9. E.U14. E.U15. E.U16. E.U18. E.U23. E.U25. E.U26. E.U27. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U8. F.U9. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	-----------------	----	--	---

3.	Paediatric Surgery	3	<p>The specificity and distinctiveness of surgical diseases in children and adolescents. Preparation for the conditions of the paediatric surgery ward, the ability to recognize surgical diseases in children. Causes, symptoms, principles of diagnosis and therapeutic procedures in the case of the most common diseases in children requiring surgical interventions. Life threatening conditions in children and rules of conduct in these conditions. Perioperative safety rules. Principles of post-operative treatment with analgesic therapy and post-operative monitoring. Indications and principles of the use of intensive care in children. Guidelines on cardiopulmonary resuscitation in newborns and children. Problems of transplantology in paediatrics. Taking medical history with the child and his family. Conducting: physical examination in a child of all ages; overall assessment, patient's state of consciousness and awareness. Assessment of newborns' condition (the Apgar scoring system) and their maturity and neonatal reflexes. Shaping the correct attitude of the doctor towards surgically ill children. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W3. E.W4. E.W5. E.W6. F.W2. F.W3. F.W4. F.W6. F.W7. F.W8. F.W9. F.W10. F.W21. F.W22. E.U2. E.U10. E.U14. E.U15. E.U16. E.U18. E.U23. E.U25. E.U27. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U8. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	--------------------	---	---	--

4.	Orthopedics and traumatology	3	<p>The specificity and distinctiveness of orthopaedic diseases. Preparation for the conditions of the orthopaedics and traumatology ward, the ability to recognize orthopaedic diseases. Causes, symptoms, principles of diagnosis and therapeutic procedures in relation to the most common diseases requiring surgical intervention, taking into account age differences. Selected issues in the field of paediatric surgery, including traumatology and otorhinolaryngology, defects and acquired diseases as an indication for surgical treatment in children. The principles of qualification and performance, and the most common complications of basic operations and invasive diagnostic and therapeutic procedures. Postoperative treatment with analgesic therapy and postoperative monitoring. Evaluation of radiological tests results in the most common types of fractures, especially long bone fractures. Limb immobilization, the type of immobilization necessary for use in typical clinical situations, and control of the right blood flow after applying the immobilizing dressing. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>F.W1. F.W2. F.W3. F.W4. F.W6. F.W7. F.W21. F.W23. E.U5. E.U6. E.U9. E.U.18. E.U.23 E.U25. E.U27. E.U30. E.U31. E.U32. E.U33. E.U34. F.U4. F.U5. F.U6. F.U7. K.S1. K.S2. K.S3. K.S4. K.S5 K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	------------------------------	---	---	---

5.	Oncological surgery	2	<p>The role of surgery in the combination treatment of cancer (principles of oncological surgery). Principles of the surgeon's cooperation with a radiotherapist, chemotherapist and cooperation with a diagnostic laboratory, radiology laboratory, microbiological and endoscopic laboratory and pathomorphology laboratory. Principles of preparing the patient for a surgery due to benign and malignant neoplasm. The most common complications of basic surgical procedures and invasive diagnostic and therapeutic procedures. Principles of perioperative safety, patient preparation for surgery, general and local anaesthesia, and controlled sedation. Problems of imaging examinations used today. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W7. E.W16. E.W24. F.W1. F.W5. F.W10. F.W13. F.W15. F.W17. F.W.20. F.W22. F.W23. F.U1. F.U2. F.U3. F.U4. F.U8. F.U21. F.U22. E.U9. E.U15. E.U16. E.U.18. E.U19. E.U23. E.U25. E.U26. E.U27. E.U30. E.U31. E.U32. E.U33. E.U34. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	---------------------	---	--	--

6.	Urology	3	<p>Knowledge of basic urological diseases and conditions (lithiasis, cancer, infections of both upper and lower male urinary and genital tracts), their symptomatology and diagnostic and therapeutic methods. Causes, symptoms, principles of diagnosis and therapeutic procedures in relation to the most common diseases requiring surgical intervention, taking into account the differences in the childhood urinary system. The principles of qualification and performance, and the most common complications of basic operations and invasive diagnostic and therapeutic procedures. Postoperative treatment with analgesic therapy and postoperative monitoring. Assisting in typical urological procedures. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W3. E.W7. F.W1. F.W3. F.W4. F.W6. F.W7. F.W10. F.W13. F.W16. F.W17. F.W21. F.W22. E.U9. E.U14. E.U15. E.U16. E.U.18. E.U19. E.U23. E.U25. E.U26. E.U27. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
----	---------	---	--	---

7.	Otolaryngology	3	<p>The most common diseases of ears, nose, throat and larynx with the basics of their diagnosis and treatment. Selected issues in otorhinolaryngology, birth defects and diseases being the indication for otorhinolaryngological treatment. The principles of qualification and performance, and the most common complications of basic surgical procedures and invasive diagnostic and therapeutic procedures in otolaryngology. Principles of postoperative care with analgesic therapy and postoperative monitoring. Problems of imaging examinations used today. Issues in the field of laryngology, phoniatics and audiology. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W7.  F.W1.  F.W2.  F.W3.  F.W4.  F.W6.  F.W7.  F.W10.  F.W17.  F.W19.  F.U1.  F.U4.  F.U21.  F.U22.  E.U5.  E.U6.  E.U9.  E.U10.  E.U14.  E.U15.  E.U18.  E.U21.  E.U23.  E.U25.  E.U26.  E.U27.  E.U28.  E.U30.  E.U31.  E.U32.  E.U33.  E.U34.  K.S1.  K.S2.  K.S3.  K.S4.  K.S5.  K.S6.  K.S7.  K.S8.  K.S9.  K.S10.  K.S11.</p>
----	----------------	---	--	--

8.	Emergency medicine and disaster medicine	3	<p>Life-threatening conditions resulting from disease entities and injuries to individual human systems and organs. Principles of planning and organizing medical security in industrial, communication, chemical and ecological disasters, natural disasters and military threats. The most common life-threatening conditions in children and rules of conduct in these conditions. Causes, symptoms, principles of diagnosis and therapeutic procedure in relation to the most common diseases requiring surgical intervention, taking into account the distinctness of childhood. Principles of functioning of the integrated state emergency medical system. Problems of transplantology, indications for transplantation of irreversibly damaged organs and tissues, and related procedures. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W16.  F.W1.  F.W9.  F.W10.  F.W11.  F.W12.  F.W20.  G.W13.  E.U3.  E.U9.  E.U12.  E.U.14  E.U15.  E.U16.  E.U24.  E.U27.  E.U29.  E.U30.  E.U.31.  E.U32.  E.U33.  E.U34.  F.U2.  F.U3.  F.U4.  F.U7.  F.U8.  F.U9.  F.U10.  F.U11.  F.U12.  F.U20.  F.U21.  F.U22.  K.S1.  K.S2.  K.S3.  K.S4.  K.S5  K.S6.  K.S7.  K.S8.  K.S9.  K.S10.  K.S11.</p>
----	--	---	---	--



9.	Gynecology and obstetrics	7	<p>Skills to provide qualified care for a woman in all periods of her life by using available modern diagnostic and therapeutic methods in the prevention and treatment of genitourinary diseases. Basic methods of foetus diagnosis and therapy. Knowledge about human sexuality and basic disorders related to it. Postoperative treatment with analgesic therapy and postoperative monitoring. Woman's reproductive functions, disorders related to them as well as diagnostic and therapeutic procedures. Identification of indications for prenatal examinations. Assessment and description of the patient's somatic and mental state as well as life-threatening conditions. Identification of signs and symptoms that indicate an abnormal pregnancy. Interpretation of the results of a physical examination of a pregnant woman (arterial pressure, heart activity) and laboratory tests showing pregnancy pathologies and cardiotocography (CTG). Recognition of the beginning of labour and its incorrect duration. Signs and symptoms during childbirth. Establishing recommendations, indications and contraindications for the use of contraceptive methods. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>A.W4. E.W6. E.W7. F.W2 F.W3. F.W4. F.W6. F.W7. F.W9. F.W10. F.W11. F.W15. F.W16. F.W17. E.U.18. E.U20. E.U21. E.U23. E.U25. E.U26. E.U27. E.U.28. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U3. F.U4. F.U.10. F.U13. F.U14. F.U15. F.U16. F.U17. F.U18. F.U19. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S6.</p>
----	---------------------------	---	--	--

				K.S7. K.S8. K.S9. K.S10. K.S11.
10.	Ophthalmology	2	<p>Anatomy, physiology and pathophysiology of the visual system. The most important diagnostic methods of the visual system with disorders of the visual system, including neuro-ophthalmology. The principles of qualification and performance, and the most common complications of basic operations and invasive diagnostic and therapeutic procedures. Sight organ diseases. Problems of contemporary imaging examinations in ophthalmology. Performing ophthalmic screening. Diagnosis of ophthalmic conditions requiring immediate specialist assistance and providing initial, qualified assistance in cases of physical and chemical eye injuries. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	F.W1. F.W2. F.W3. F.W4. F.W10. F.W18. E.U1. E.U2. E.U3. E.U5. E.U6. E.U9. E.U10. E.U12. E.U18. E.U20. E.U21. E.U23. E.U25. E.U26. E.U27. E.U28. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U20. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.

11.	Neurosurgery	2	<p>The specificity and distinctness of neurosurgical diseases in children and adolescents. Conditions of the neurosurgery ward, ability to recognize surgical diseases and basic neurological symptoms. Causes, symptoms, principles of diagnosis and therapeutic procedure in the most common diseases of the nervous system. Assisting in carrying out procedures and medical procedures related to neurosurgery. Shaping the correct attitude of the doctor towards patients after severe head trauma, patients with brain tumours and spinal cord diseases. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>E.W16. E.W27. F.W1. F.W2. F.W3. F.W4. F.W6. F.W7. F.W10. F.W13. F.W20. F.W22. F.W23. E.U1. E.U2. E.U3. E.U5. E.U6. E.U9. E.U10. E.U12. E.U15. E.U16. E.U18. E.U23. E.U25. E.U26. E.U27. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U8. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7.</p>
-----	--------------	---	--	--

				K.S8. K.S9. K.S10. K.S11.
12.	Transplantology	1	Indications and principles of organ transplantation according to the current state of knowledge. Legal, ethical and moral aspects of organ transplantation from the living and deceased donor and transplant organization (POLTRANSPLANT). Information on quality of life, immunosuppressive treatment, occurrence and control of complications after organ transplantation. The basic issues of transplantology, indications for transplantation of irreversibly damaged organs and tissues, and related procedures. Rules for suspicion and recognition of brain death. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practicing medical profession. The student shows motivation to broaden his/her knowledge.	F.W1. F.W3. F.W4. F.W6. F.W7. F.W17. F.W21. F.W22. G.W9. E.U32. E.U33. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
13.	Diagnostic imaging	3	Contemporary methods of imaging diagnostics and the possibilities of their use in the diagnostic algorithm. Principles of patient management and preparation for individual imaging tests. Indications and contraindications for individual diagnostic imaging methods and the principles of using contrast agents. Principles for evaluation and interpretation of obtained images and test results. Basic issues in the field of interventional radiology as well as radiobiology and radiological protection. Causes, symptoms, principles of diagnosis and therapeutic procedure in the case of the most common central nervous system diseases. The relationship between anatomical structures based on in vivo diagnostic tests, in particular in the field of radiology (review pictures, tests with contrast agents, computed tomography and nuclear magnetic resonance imaging). Harmfulness assessment of ionizing radiation dose. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	F.W17. E.U14. E.U30. E.U31. E.U32. E.U33. A.U4. B.U2. F.U4. F.U5. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.

14.	Head and Neck Surgery	2	<p>Acquiring knowledge about the pathogenesis of diseases of the head and neck organs. Acquiring the ability to diagnose and treat basic diseases of the head and neck organs. Knowledge of the principles of surgical operations in the field of head and neck organs. The student is able to establish a therapeutic relationship with the patient and his family. Compliance with ethical principles resulting from practicing the medical profession. Demonstrates motivation to deepen knowledge.</p>	<p>F.W1. F.W3. F.W4. F.W6. F.W7. F.W10. F.W17. F.W19. E.U15. E.U25. E.U26. E.U30. E.U31. E.U32. E.U33. F.U1. F.U3. F.U4. F.U21. F.U22. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<b>G. Legal and organizational aspects of medicine</b>		<b>6</b>		

1.	Hygiene	1	<p>Basic knowledge of hygiene. Skills to recognize health problems resulting from various environmental factors. Promoting a healthy lifestyle, knowing the environmental and epidemiological conditions of the most common diseases. The student knows the nutrition rules in healthy and sick children, preventive vaccinations and keeping a routine health check-ups. The concept of public health, its goals, tasks, as well as the structure and organization of the health care system at the national and global level and the impact of economic conditions on health care options. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>C.W13. G.W1. G.W4. G.U2. G.U3. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
2.	Epidemiology	1	<p>Basic data on health phenomena in society and forecasting their impact on the functioning of health care, assessment of the state of health of the population based on epidemiological and demographic data. Determinants of health and disease, selected measures of population health and the possibilities of their use. Methods for identifying and examining risk factors, types of epidemiological studies to assess the health situation. Measure the incidence of diseases and disabilities and assess the epidemiological situation of selected diseases. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>C.W11. E.W3. E.W7. E.W16. E.W18. E.W24. E.W33. E.W35. E.W37. G.W1. G.W2. G.W3. G.W21. G.W22. G.U1. G.U2. G.U4. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>

3.	Public health	1	<p>Current state of knowledge about the social dimension of health and illness, the impact of the social environment (family, social networks) and social inequalities on health, as well as socio-cultural differences and the role of social stress in health and self-destructive behaviour. The importance of health, illness, disability and old age in relation to social attitudes, social consequences of illness and disability, and socio-cultural barriers. Principles of health promotion, its tasks and main directions of action, with particular emphasis on knowledge of the role of elements of a healthy lifestyle. Basic regulations regarding the organization and financing of health care, universal health insurance and the principles of the organization of healthcare institutions. Interpretation of measures of the incidence of diseases and disability. Assessment of the epidemiological situation of diseases commonly occurring in the country. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>G.W1. G.W2. G.W3. G.W4. G.U1. G.U2. G.U5. G.U6. G.U8. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
4.	Medical law	1	<p>Knowledge about legal regulations for the provision of health services, patient rights, as well as exercising medical profession and the functioning of medical self-government. The principles of physician-patient privilege, legal requirements for keeping medical records and the scope of criminal, civil and professional liability of a physician. Legal regulations regarding the provision of health services, patient rights, the basics of practising medical profession and the functioning of medical self-government as well as basic regulations regarding the organization and financing of the health service, universal health insurance and the principles of organization of healthcare institutions. Legal obligations of a physician regarding a declaration of death. Regulations regarding medical experiment and conducting other medical research and regarding transplants, artificial procreation, abortion, aesthetic procedures, palliative treatment, and mental illnesses. Principles of pharmaceutical law and physician-patient privilege, keeping medical records, criminal, civil and professional liability of a physician. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>G.W5. G.W6. G.W7. G.W8. G.W9. G.W10. G.W11. G.W12. G.W18. G.W20. G.U5. G.U6. G.U8. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>

5.	Forensic medicine	2	<p>Basic issues in the field of forensic medical thanatology and forensic medical traumatology. Autopsy and forensic medical techniques. Types of forensic medical examinations of living persons and principles of preparing documentation of such examinations. Basic concepts and issues in the field of forensic medical toxicology with particular emphasis on narcotic drugs and stimulants, and forensic genetics issues. Medical and judicial decisions in criminal and civil lawsuits. Principles of forensic medical diagnostics and opinions on cases of infanticide and reconstruction of circumstances of a traffic accident. Taking material for toxicological and hemogenetic tests. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>G.W13. G.W14. G.W15. G.W16. G.W17. G.W18. G.W19. G.U9. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<b>H. Practical clinical teaching the 6th year of studies</b>		<b>in 60</b>		



1.	Practical clinical teaching - Internal medicine	16	<p>Preparing the student for: independent planning of diagnostic procedures and interpretation of its results; conducting differential diagnosis; planning therapeutic procedures and predicting the consequences of planned activities in hospital and outpatient clinic. Developing practical skills in the field of medical history, physical examination, symptomatology of internal diseases, performing basic diagnostic tests. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>H.U1. H.U3. H.U4. H.U5. H.U6. H.U7. H.U8. H.U9. H.U11. H.U14. H.U15. H.U16. H.U24. H.U25. H.U28. H.U30. H.U31. H.U33. H.U36. H.U39. H.U40. H.U41. H.U42. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
2.	Practical clinical teaching - Pediatrics	8	<p>Developing practical skills related to the specificity and distinctiveness of pathophysiology and the clinic of the course of diseases in children and adolescents. Mastering the theoretical foundations and practical skills in the diagnosis and therapy of paediatric diseases and secondary symptoms. Mastering the skill of taking medical history, physical examination of a child. Mastering the basics of interpretation of additional tests in children. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family.</p>	<p>H.U1. H.U3. H.U4. H.U5. H.U6. H.U7. H.U8. H.U9.</p>

			Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	H.U11. H.U14. H.U16. H.U24. H.U26. H.U29. H.U30. H.U31. H.U33. H.U34. H.U35. H.U37. H.U38. H.U41. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
3.	Practical clinical teaching - Surgery	8	<p>Getting to know the characteristics of a surgical ward. Understanding the principles of doctor's work in the surgical ward. Getting to know the principles of cooperation with the diagnostic laboratory, radiology laboratory, microbiology and endoscopic laboratory. Learning the principles of perioperative care, including: preparing the patient for urgent and planned surgery as well as prevention and procedures of postoperative complications. Developing skills in the management of acute and chronic wounds. Acquiring the ability to manage acute conditions in surgery, including abdominal diseases: acute appendicitis, acute cholecystitis, gastrointestinal obstruction, perforation of gastric and duodenal ulcer, peritonitis, gastrointestinal bleeding. Developing skills in dealing with trauma patients, its impact on the body and treating shock, and in particular with the most common injuries of head, neck, chest and abdomen, limbs and their consequences. Acquiring the ability to assess the patient's nutritional state and conduct nutritional treatment in surgery. Acquiring the skills to assess, rules of dressing and treatment of burns and frostbites. Obtaining practical competence in the field of diagnostic and therapeutic procedures in the case of the most common cancers requiring surgical procedures, in particular: lung cancer, breast cancer, colorectal cancer, stomach cancer. Developing skills necessary in case of: hernia, pancreatic diseases, cholelithiasis, portal hypertension and its complications. Obtaining practical competences related to surgical procedures in relation to the most common endocrine system diseases – thyroid, adrenal gland diseases, multiple endocrine gland cancers. Obtaining practical competences related to surgical procedures in relation to the</p>	H.U1. H.U5. H.U11. H.U12. H.U13. H.U16. H.U17. H.U18. H.U19. H.U24. H.U28. H.U30. H.U31. H.U33. H.U41. K.S1. K.S2.

			<p>most common diseases of the peripheral circulatory system: acute and chronic ischemia of the lower limbs, abdominal aortic aneurysm, chronic venous insufficiency of the lower limbs. Developing practical competence in the field of surgical treatment of coronary artery disease and valvular heart disease. Obtaining practical skills on the principles of organ transplantation. Developing practical competence in the field of metabolic surgery. Obtaining practical competence in the field of prevention and treatment of surgical infections. Developing practical skills in taking medical history, physical examination, symptomatology of internal diseases, carrying out basic diagnostic tests. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations, ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
4.	<p>Practical clinical teaching - Gynecology and obstetrics</p>	4	<p>Obtaining by the student the necessary skills to provide qualified care for a woman in all periods of her life by using available modern diagnostic and therapeutic methods in the prevention and treatment of genitourinary diseases. Preparing the student to understand and interpret: basics of gynaecology and obstetrics; rules for the organization and exercise of obstetric care for a woman during pregnancy and childbirth; principles of organization and conducting programs for the prevention and treatment of cancer of the female urogenital organs; results of diagnostic tests used in obstetrics and gynaecology; methods for promoting health and family planning in women. Preparing students to use the acquired knowledge in obstetrics and gynaecology in professional practice. Education in the use of medical vocabulary in communication with the patient: interview and transfer of basic information to the patient in relation to tests, procedures and medical procedures regarding treatment and care in obstetrics and gynaecology. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.</p>	<p>H.U1. H.U5. H.U8. H.U9. H.U10. H.U11. H.U16. H.U17. H.U24. H.U28. H.U30. H.U31. H.U33. H.U41. H.U43. H.U44. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>

5.	Practical clinical teaching - Psychiatry	4	Obtaining knowledge about the specifics of work of a psychiatrist. Obtaining knowledge about the most common mental illnesses of adults and children. Gaining the ability to properly recognize, treat mental illnesses and communicate with the patient and his family. Preparation for work in an outpatient clinic and a psychiatric ward. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	H.U1. H.U5. H.U24. H.U25. H.U30. H.U31. H.U32. H.U33. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
6.	Practical clinical teaching - Emergency medicine	4	Familiarizing students with extended information on life-threatening conditions arising from disease entities and injuries to individual human systems and organs. Familiarizing student with the principles of planning and organization of medical security in industrial, communication, chemical and ecological disasters, natural disasters and military threats. Preparing students to implement adequate patterns of rescue procedures in certain life-threatening conditions. Developing the skills of managing a rescue operation in a rescue team. Preparing students to conduct medical, rescue and evacuation activities at the place of disaster and outside the area of operations and to cooperate with other rescue services. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	H.U1. H.U2. H.U5. H.U8. H.U14. H.U15. H.U16. H.U17. H.U19. H.U20. H.U21. H.U22. H.U23. H.U24. H.U27. H.U28. H.U30. H.U31. H.U33. H.U37. H.U38.

				H.U39. H.U40. H.U41. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
7.	Practical clinical teaching - Family medicine	4	Obtaining knowledge about the specifics of the doctor's work. Obtaining knowledge about the most common problems of paediatrics, adulthood, surgical and geriatric problems as well as family and environmental problems in primary health care. Developing skills to properly communicate with the patient and his family. Developing skills to create and manage family doctor practice. Preparation for work in the primary care outpatient clinic. Shaping attitudes: social in doctor-patient, doctor-therapeutic team relations; ethical in accordance with the principles of ethics; in accordance with legal regulations. The student is able to establish a therapeutic relationship with the patient and his/her family. Compliance with ethical principles arising from practising medical profession. The student shows motivation to broaden his/her knowledge.	H.U1. H.U5. H.U8. H.U9. H.U16. H.U24. H.U25. H.U27. H.U28. H.U30. H.U31. H.U33. H.U34. H.U35. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
8.	Optional specialization chosen by the student	12	Student chooses seminars/tutorials which present various cases / clinical cases from each specialty in accordance with the applicable educational standards for medical studies.	
9.	Objective Structured Clinical Examination (OSCE)	0		
<b>GENERAL ACADEMIC COURSES</b>		<b>2</b>		
1.	Latin	2	Anatomical, histological and embryological nomenclature in Latin.	A.W1.

			Grammar rules and lexis of the Latin language. Medical terminology and translation of medical and anatomical texts.	D.U5. K.S5. K.S7. K.S11.
2.	Library information	0	Basic knowledge about the functioning of the University Library. Rules for using collections and services of the University Library. Preparation for quick and accurate search of information needed to study. Practical search and ordering in an online catalogue. Basic terminology related to the functioning of the library and terminology used in the online catalogue.	D.W19. D.U5. K.S5. K.S7. K.S11.
3.	Elements of Health and Safety at Work and Ergonomics	0	General health and safety regulations in force at the University and rules of conduct in the event of various hazards. Requirements for organizing safe work, both in terms of the material work environment and human behaviour. Procedures to deal with accidents, during the action of dangerous, harmful and arduous factors, providing pre-medical assistance. Anticipating the effects of own behaviour in any job and other areas of activity. Knowledge necessary to organize work processes ensuring the safety of their participants.	G.W2. G.W5. G.U5. G.U8. G.U10. K.S5. K.S7. K.S11.
4.	Physical education	0	Improving movement skills useful in health, utilitarian, recreational and sports activities through participation in selected practical classes in physical education. Development of fitness and coordination skills and providing students with knowledge and skills enabling self-control and self-assessment and independent undertaking of actions in this area. Attitudes of conscious participation of students in various forms of sports and recreational activities during studies and after completing education in order to maintain physical and mental health.	D.U4. D.U7. K.S5. K.S7. K.S11.
<b>COURSES IN THE SCOPE OF STUDENTS' SUPPORT IN THE LEARNING PROCESS</b>		<b>4</b>		
<b>Group of courses in the scope of students' support in the learning process. Student chooses 2 courses, 2 ECTS points each - 4 ECTS points to obtain in total.</b>			<b>List of courses:</b>	
1.		2	Coping with stress	D.W4. D.U12. K.S5. K.S7. K.S11.
2.		2	Methods of learning support	D.W1. D.W3. D.U4. K.S5. K.S7. K.S11.

	3.	2	Coaching	D.W1. D.W3. D.U7. K.S5. K.S7. K.S11.
	4.	2	The psychology of personal development	D.W1. D.W3. D.U7. D.U8. K.S5. K.S7. K.S11.
	5.	2	Yourself Management	D.W1. D.W3. D.U4. D.U7. K.S5. K.S7. K.S11.
<b>SAFETY IN HEALTHCARE FACILITIES</b>		<b>0</b>		
1.	Elements of Health and Safety in Healthcare Facilities	0	Analysis of dangerous, harmful and arduous factors at healthcare work places. The specificity of accidents at work, occupational diseases among people working in healthcare facilities. The use of ergonomics in healthcare facilities with reference to patients' and staff's safety. Possibilities to reduce occupational risk at work places - analysis based on selected examples. Prevention of musculoskeletal dysfunction.	G.W2. G.W5. G.U8. G.U10. K.S11.
2.	Epidemiological Safety	0	Preparation for work: outfit, hair, hands, personal protective equipment. Hand hygiene. Procedures after exposure to blood and other potentially infectious material (IPIM) that may transmit HBV, HCV, HIV infection. Selection and use of disinfectants. Procedure in case of surface contamination with organic matter. Handling of used material and medical equipment. Isolation procedure. Documentation on the prevention of hospital infections and infectious diseases.	G.W2. G.W5. G.U2. G.U8. K.S11.
3.	Fire Safety	0	Fire safety rules in healthcare facilities. Fire protection conditions. Groups and sources of fires and their causes. Fire roads and fire safety of buildings. Fire safety instruction. Escape routes and passages. Evacuation regulations. Fire prevention at the workplace. Rules of behavior in the event of fire in the healthcare facility. Fire protection equipment.	G.W5. G.U8. K.S11.
<b>ELECTIVE COURSES:</b>		<b>28</b>		

<p><i>Names of groups of courses should be given without listing their names. Names of courses can be given in the „Course content“.</i></p> <p><b>Group of elective, directional courses.</b></p> <p><b>During the course of study, student chooses 21 courses with 28 ECTS points in total, including those in the form of lectures and classes or lectures. There are 77 elective courses in total to choose from.</b></p>				<p><b>List of elective courses:</b></p>
1.		1	Homeostatic imbalance of epithelial tissue	A.W1. A.W2. A.W3. A.U1. A.U2. K.S5. K.S7. K.S10. K.S11.
2.		1	Tissue structure abnormalities	A.W1. A.W2. A.W3. A.U1. A.U2. K.S5. K.S7. K.S10. K.S11.
3.		1	Structures of the human body in imaging studies	A.W1. A.W3. A.U3. A.U4. K.S5. K.S7. K.S10. K.S11.
4.		1	Structural Basis of Cardiovascular Interventions	A.W1. A.W3. A.U3. A.U4. K.S5. K.S7. K.S10. K.S11.



5.		2	The importance of areobiological research in medicine	A.W2. A.U1. K.S5. K.S7. K.S10. K.S11.
6.		1	Scientific medical information	B.W23. B.W25. C.U12. K.S5. K.S7. K.S10. K.S11.
7.		2	Preclinical and clinical trials in the drug development process	B.W26. G.W8 B.U10. B.U10. K.S5. K.S7. K.S10. K.S11.
8.		2	The basics of cell culture techniques	A.W2. A.U1. A.U2. B.U12. K.S5. K.S7. K.S10. K.S11.
9		2	The basics of cancer cell biology	B.W16. B.W17. C.W9. C.W33. C.W38. E.W24. B.U8. K.S5. K.S7. K.S10. K.S11.
10.		2	The human microbiome in health and disease	C.W10. C.W32. C.U6 K.S5. K.S7. K.S10. K.S11.

11.		2	Dressing wounds	F.W3. F.W4. E.U15. F.U2. F.U3. F.U8. K.S5. K.S7. K.S10.
12.		2	Evidence-Based Medical Practice (EBM)	B.W26. D.W19. E.W37. B.U11. D.U4. K.S5. K.S7. K.S10. K.S11.
13.		1	Genetically modified organisms	B.W26. C.W3. C.W6. B.U10. K.S5. K.S7. K.S10. K.S11.
14.		1	Active ingredients of living matter	B.W15. C.W38. C.W39. B.U6. B.U7. K.S5. K.S7. K.S10. K.S11.
15.		1	Molecular basis of sensory organ function	B.W6. B.U1. B.U6. K.S5. K.S7. K.S10. K.S11.

16.		2	Electrophysiology	B.W19. B.W20. B.U7. K.S5. K.S7. K.S10. K.S11.
17.		1	Medical equipment	B.W6. B.W8. B.W9. B.U1. B.U2. B.U10. K.S5. K.S7. K.S10. K.S11.
18.		1	Ionizing radiation in medicine	B.W5. B.U1. B.U2. K.S5. K.S7. K.S10. K.S11.
19.		1	NGS in medical diagnostics	B.W23. B.W24. C.W8. B.U8. K.S5. K.S7. K.S10. K.S11.
20.		1	Antibiotics and probiotics in the human digestive system	C.W9. C.W30. C.U6. K.S5. K.S7. K.S10. K.S11.

21.		2	Modern microscopic techniques in medicine	A.W2. B.W17. A.U2. K.S5. K.S7. K.S10. K.S11.
22		2	Palpatory anatomy	A.W1. A.U3. K.S5. K.S7. K.S10. K.S11.
23		2	The basics of allergology	C.W13. C.W18. C.W20. C.U5. K.S5. K.S7. K.S10. K.S11.
24.		2	Planning and operational management in healthcare organizations	G.W4. D.U4. G.U10. K.S5. K.S7. K.S10. K.S11.
25.		2	Foreign language	D.W7. D.U7. D.U9. D.U14. K.S5. K.S7. K.S10. K.S11.
26.		1	Genetic engineering	C.W5. C.W6. C.W8. C.U2. K.S5. K.S7. K.S10. K.S11.
27.		1	Oncological immunology	C.W21. C.W22. C.W42.

				C.W43. E.W24. C.U7. K.S5. K.S7. K.S10. K.S11.
28.		1	Haemostasis and thrombosis	B.W19. B.W20. B.U7. K.S5. K.S7. K.S10. K.S11.
29.		1	Propedeutics in dentistry	E.W2. E.W7. C.U7. E.U1. E.U2. E.U21. K.S5. K.S7. K.S10. K.S11
30.		2	Crisis intervention	D.W1. D.W2. D.W4. D.W5. D.W11. D.W13. D.U1. D.U3. D.U7. D.U9. K.S5. K.S7. K.S10. K.S11.
31.		2	Sign language	D.W6. D.W7. D.U7. D.U10. K.S5. K.S7. K.S10. K.S11.

32.		2	Laboratory and clinical cases	E.W7. E.W39. E.U9. E.U19. K.S5. K.S7. K.S10. K.S11.
33.		2	Diet therapy	C.W39. C.W40. E.W1. E.U21. K.S5. K.S7.
34.		2	Proteomics, metabolomics and transcriptomics in medicine	B.W12 B.W15. B.W24. B.U12. K.S5. K.S7. K.S10. K.S11.
35.		2	Echocardiography	E.W7. E.U9. K.S5. K.S7. K.S10. K.S11.
36.		1	Nutritional prophylaxis	C.W39. C.W40. E.W1. E.U21. K.S5. K.S7. K.S10. K.S11.
37.		1	Nutrition in obesity and metabolic diseases	C.W40. E.W1. E.W5. E.W9. E.U25. K.S5. K.S7.

				K.S10. K.S11.
38.		1	Pathophysiology of kidney	C.W27. E.W3. E.W7. E.W8. C.U7. C.U13. K.S5. K.S7. K.S10. K.S11.
39.		1	Pathophysiology of pancreas	B.W15. C.W27. C.W29. C.W36. E.W7. C.U7. K.S5. K.S7. K.S10. K.S11.
40.		1	Electrophysiology in cardiology	B.W19. B.W20. B.U7. K.S5. K.S7. K.S10. K.S11.
41.		1	Pathophysiology of the Endocrine System	C.W27. E.W7. C.U7. K.S5. K.S7. K.S10. K.S11.
42.		1	Clinical diagnostics	E.W7. E.W11. E.U9. E.U19. K.S5. K.S7. K.S10. K.S11.

43		1	Rational antibiotic therapy	C.W9. C.W32. E.U22. K.S5. K.S7. K.S10. K.S11.
44.		1	Nutrigenetics and nutrigenomics	C.W39. C.U12. K.S5. K.S7. K.S10. K.S11.
45.		1	Pediatric Dermatology	E.W3. E.W35. E.U10. K.S5. K.S7. K.S10. K.S11.
46.		1	Pharmacoeconomics	C.W29. C.W30. C.W31. C.W36. C.W39. C.W40. C.U7. K.S5. K.S7. K.S10. K.S11.
47.		1	Bloodborne viral infections	C.W12. E.W33. E.W34. G.W3. E.U9. E.U12. K.S5. K.S7. K.S10. K.S11.



48.		1	Pain therapy	E.W27. F.W7. E.U9. E.U10. K.S5. K.S7. K.S10. K.S11.
49.		1	The importance of genetic profiles in oncological treatment	C.W2. C.W7. C.W8. C.W43. E.W24. C.U2. C.U3. K.S5. K.S7. K.S10. K.S11.
50.		1	Endoscopic and laparoscopic surgery	F.W1. F.W3. F.W4. F.W6. F.W7. F.W9. F.W13. F.U4. F.U22. K.S5. K.S7. K.S10. K.S11.
51.		1	Pediatrics- Child Cardiology	E.W3. F.W9. F.W10. E.U10. F.U4. K.S5. K.S7. K.S10. K.S11.

52.		1	Lung diseases	E.W3. E.W7. F.W17. E.U4. E.U9. E.U10. K.S5. K.S7. K.S10. K.S11.
53.		1	Vascular surgery	F.W1. F.W3. F.W4. F.W6. F.W7. F.W10. F.W17. F.U4. F.U22. G.U9. K.S5. K.S7. K.S10. K.S11.
54.		1	Emergency conditions in anesthesiology	F.W6. F.W7. F.W8. F.W9. F.W10. F.W23. F.U4. F.U22. K.S5. K.S7. K.S10. K.S11.
55.		1	Hypertensiology	E.W3. E.W7. E.U9. E.U10. K.S5. K.S7. K.S10. K.S11.
56.		1	Allergology	C.W16. C.W18. C.W20. C.W23. E.W3. E.W7.

				E.U3. E.U9. E.U10. K.S5. K.S7. K.S10. K.S11.
57.		1	Intervention cardiology	E.W3. E.W7. F.W4. F.W13. F.W17. F.U22. K.S5. K.S7. K.S10. K.S11.
58.		1	Radiotherapy	C.W41. E.W24. E.W27. B.U1. B.U2. E.U15. E.U19. F.U22. K.S5. K.S7. K.S10. K.S11.
59.		1	Bariatric surgery	F.W1. F.W4. F.W6. F.W7. F.W17. F.U22. K.S5. K.S7. K.S10. K.S11.

60.		1	Mental disorders after the COVID-19 pandemic.	E.W7. E.W17. E.W18. E.W19. E.W20. E.W21. E.W23. E.U7. E.U9. E.U11. F.U22. K.S5. K.S7. K.S10. K.S11.
61.		1	Patient Safety	G.W5. G.W6. G.W8. G.W9. G.W10. G.W11. G.W17. F.U22. G.U5. G.U6. G.U8. K.S5. K.S7. K.S10. K.S11.
62.		1	Methodology of writing scientific papers	B.W23. B.W24. B.W26. B.U8. B.U9. B.U10. B.U11. K.S5. K.S7. K.S10. K.S11.

63.		1	Anesthesiology and Intensive Pediatric Therapy	E.W3. F.W2. F.W3. F.W4. F.W6. F.W7. F.W9. F.W10. F.W22. F.W23. E.U10. F.U4. F.U9. F.U10. F.U22. K.S5. K.S7. K.S10. K.S11.
64.		1	Combination Therapy	C.W42. E.W3. E.W7. E.W16. E.W24. E.U19. K.S5. K.S7. K.S10. K.S11.
65.		1	Pharmacogenetics	C.W2. C.W5. C.W7. C.W8. C.W9. C.W30. C.W31. C.W33. C.U2. K.S5. K.S7. K.S10. K.S11.

66.		1	Child and Adolescent Psychiatry	D.W1. D.W4. E.U11. F.W10. E.W5. E.W17. E.W18. E.W19. E.W20. E.W21. E.W23. F.U22. K.S5. K.S7. K.S10. K.S11.
67.		1	Fundamentals of coding and settling benefits under contracts with a public payer	G.W5. G.W6. G.W9. G.W11. G.W12. G.U5. G.U6. G.U8. K.S5. K.S7. K.S10. K.S11.
68.		1	Traumatology of the musculoskeletal system	F.W1. F.W4. F.U5. F.U22. K.S5. K.S7. K.S10. K.S11.

69.		4	Elective course-preparation for the Final Medical Examination: Internal Medicine Padiatrics Surgery Gynecology and Obstetrics Emergency Medicine and Intensive Care Family Medicine Psychiatry Bioethics and Medical Law Certification Public health	Learning outcomes codes are the same as those listed in the basic/directional courses.
70.		2	Surgical suturing	F.W3. F.W4. E.U15. F.U1 F.U3. K.S5. K.S7. K.S10. K.S11.
71.		2	Electrocardiography	E.U14. E.U9. E.U10. B.W25. E.W3. E.W7. F.U22. K.S5. K.S7. K.S10. K.S11.
72.		2	Diagnostic imaging in emergency	A.U4. B.W7. F.W17. F.U4. E.U14. F.U22. K.S5. K.S7. K.S10. K.S11.
73		1	Doctor's Legal Liability	G.U5. E.U18. G.W5. G.W6. G.W7.

				G.W9. G.W10 G.W18. G.W20. G.U6. G.U7. G.U8. K.S3. K.S.11
74.		1	Obesity Treatment	E.W7 F.W3. F.W4. F.U1. F.U3. F.U22. K.S6. K.S7.
75.		1	Emergency Conditions in Orthopedics	F.W1. F.W3. F.W4. E.U9. E.U15. F.U4. F.U5. F.U6. F.U22. K.S3. K.S.11.
76.		1	Emergency Conditions in Surgery	F.W1. F.W3. F.W4. F.W6 E.U15. F.U1. F.U3. F.U4. F.U22. K.S3. K.S11.



77.		1	Clinical nutrition	E.W1. E.W7. E.W9 E.W24 E.U14. K.S5 K.S7. K.S10. K.S11.
78.		1	Strategic planning in healthcare organizations	G.W4. D.U4. G.U10. K.S5. K.S7. K.S10. K.S11.
<b>HOLIDAY WORK PLACEMENT (hours, principles, form)</b>		<b>20</b>		
<b>First aid and nursing – 120 hours after 2nd semester</b>		4	Acquiring knowledge about the organization of the hospital ward. Familiarization with the principles of keeping medical records, in particular regarding admission to the ward, discharge and transfer. Understanding the scope and nature of nursing care in relation to a patient. Developing the skills to perform basic care procedures: measuring basic parameters: temperature, pulse, blood pressure, breathing; techniques of hygiene procedures performed on the patient, feeding the patients; drawing blood for biochemical tests, peripheral puncture, carrying out test strips, measurement of blood glucose level using a glucometer, oral administration of drugs, subcutaneous and intramuscular injections, intravenous drip infusion, collection of nasal and throat swab. Developing the ability to establish communication and maintain proper behaviour and relationship with the patient and medical staff.	D.U3. D.U13. E.U14. E.U15. E.U17. E.U23. E.U25 E.U26. E.U27. E.U28. E.U30 E.U32. E.U33. F.U1. F.U2. F.U11. F.U12. G.U7. G.U8. G.U9. G.U10. K.S1. K.S2. K.S3. K.S4. K.S5.

			K.S6. K.S7. K.S8. K.S9. K.S10. K.S.11
<b>Out-patient health care – 90 hours after 4th semester</b>	3	<p>Acquiring knowledge about the specifics of the work of a primary care physician. Acquiring knowledge about the most common problems of paediatrics, adulthood, surgical and geriatric problems as well as family and environmental problems in primary health care. Developing skills to properly communicate with the patient and his family. Developing skills to create and manage family doctor practice. Preparation for work in the primary care outpatient clinic. Developing the ability to establish communication and maintain proper behaviour and relationship with the patient and medical staff. The student takes medical history from a child and his family; carries out full and targeted physical examination of an adult patient; assesses the general condition, the state of consciousness and awareness of the patient; compares anthropometric and blood pressure measurements with data on centile grids; carries out routine health checks. Developing skills to perform basic procedures; the student performs basic procedures and medical treatments, including: body temperature measurement, heart rate measurement, non-invasive blood pressure measurement; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection; taking swabs from the nose, throat and skin, pleural puncture, standard resting electrocardiogram with interpretation; simple test strips and blood glucose measurement; the student collects material for tests used in laboratory diagnostics.</p>	D.U3. D.U13. E.U1. E.U2. E.U3 E.U8. E.U9 E.U10. E.U11. E.U12. E.U13. E.U14. E.U15. E.U18 E.U20. E.U21. E.U23. E.U24. E.U25 E.U26. E.U27. E.U28 E.U29 E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U11. F.U12. F.U22. G.U6. G.U8. G.U9. G.U10. K.S1. K.S2. K.S3. K.S4.

			K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>Ambulatory care – 30 hours          after 4th semester</b>	1	<p>Acquiring knowledge about the specifics of the work of an emergency physician. Acquiring knowledge about the most common paediatric, adulthood, surgical and geriatric problems occurring in emergency care. Developing skills to properly communicate with the patient and his family. Developing skills to create and manage a medical emergency team. Preparation for work in emergency conditions. Developing skills to establish communication and maintain proper behaviour and relationship with the patient and medical staff. The talks medical history from a child and his family; carries out a full and targeted physical examination of an adult patient; assesses the general condition, the state of consciousness and awareness of the patient; assesses and describes the patient's somatic and mental state; recognizes life-threatening states; recognizes the state after consumption of alcohol, drugs and other drugs; plans diagnostic, therapeutic and preventive measures; qualifies the patient for home and hospital treatment; interprets laboratory tests and identifies the causes of deviations; plans how to deal with exposure to a blood-borne infection. Developing skills to perform basic procedures. The student performs basic procedures and medical treatments, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection; taking swabs from the nose, throat and skin, puncture of the pleural cavity; standard resting electrocardiogram with interpretation; simple test strips and blood glucose measurement; collects material for tests used in laboratory diagnostics.</p>	D.U3. D.U13. E.U1. E.U2. E.U5. E.U6. E.U7. E.U9. E.U10. E.U11. E.U12. E.U14. E.U15. E.U18. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U6. F.U8. F.U9. F.U10. F.U11. F.U20.

			F.U12. F.U22. G.U5. G.U6. G.U7. G.U8. G.U9. G.U10. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>Internal medicine – 120 hours          after 6th semester</b>	4	<p>The student takes medical history from an adult patient; carries out full and targeted physical examination of an adult patient. The student assesses general condition, state of consciousness and awareness of the patient. The student conducts differential diagnosis of the most common diseases in adults and children. The student assesses and describes the patient's somatic and mental state. The student recognizes states of immediate threat to life; recognizes the state of consumption of alcohol, drugs and other drugs. The student plans diagnostic, therapeutic and preventive procedures; analyses the possible adverse reactions of individual drugs and their interactions; proposes individualization of current therapeutic guidelines and other methods of treatment against ineffectiveness or contraindications to standard therapy; recognizes the symptoms of drug dependence and proposes therapeutic treatment; qualifies the patient for home and hospital treatment. The student defines states in which the duration of life, functional state or preferences of the patient limit the conduct in accordance with the guidelines specified for the disease. The student interprets laboratory tests and identifies the causes of deviations. The student uses nutritional therapy (including enteral and parenteral nutrition); plans how to deal with exposure to a blood-borne infection. Takes samples for tests used in laboratory diagnostics; performs basic medical procedures and procedures, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; monitors vital signs using a cardiac monitor, pulse oximetry; spirometry, oxygen treatment, assisted and replacement ventilation; oropharyngeal tube insertion; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection, taking swabs</p>	D.U3. D.U13. E.U1. E.U2. E.U3. E.U5. E.U9. E.U12. E.U14. E.U15. E.U16. E.U18. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32.

		<p>from the nose, throat and skin, puncture of the pleural cavity; bladder catheterization in both men and women, nasogastric intubation, gastric lavage, enema; standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation; simple test strips and blood glucose measurement. The student implements basic treatment in acute intoxication; monitors the condition of the patient who is poisoned by chemical substances or drugs; recognizes the patient's agony and declares his death; keeps patient's medical records; adheres to the principles of asepsis and antisepsis. The student inserts peripheral puncture; examines the nipples, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen, and also carries out rectal examination; performs basic resuscitation procedures with the use of an automatic external defibrillator and other rescue operations as well as provides first aid; tries to avoid malpractice in his/her own actions; takes blood according to the rules for toxicological tests and protects the material for hemogenetic tests.</p>	<p>E.U33. E.U34. F.U1. F.U4. F.U11. F.U12. F.U20. F.U21. F.U22. G.U5. G.U6. G.U7. G.U8. G.U9. G.U10. G.U11. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<p><b>Intensive care – 60 hours after 8th semester</b></p>	<p>2</p>	<p>The student takes medical history from a child and his family; carries out full and targeted physical examination of an adult patient; assesses the general condition, the state of consciousness and awareness of the patient; evaluates and describes the patient's somatic and mental state; recognizes states of immediate threat to life; plans diagnostic, therapeutic and preventive measures; defines states in which the duration of life, functional state or preferences of the patient limit the conduct in accordance with the guidelines set out for the disease; interprets laboratory tests and identifies the causes of deviations; plans to deal with exposure to a blood-borne infection; takes samples for tests used in laboratory diagnostics; performs basic medical treatments and procedures, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; monitoring of vital signs using a cardiac monitor, pulse oximetry; spirometry, oxygen treatment, assisted and replacement ventilation; oropharyngeal tube insertion; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary</p>	<p>D.U3. D.U13. E.U1. E.U2. E.U3. E.U5. E.U6. E.U7. E.U9. E.U10. E.U14. E.U15. E.U16. E.U18. E.U30.</p>

		<p>blood collection; taking swabs from the nose, throat and skin, puncture of the pleural cavity; bladder catheterization in both men and women, nasogastric intubation, gastric lavage, enema; standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation; simple test strips and blood glucose measurement. The student assists in carrying out the following medical procedures: transfusion of blood and blood-borne products, pleural cavity drainage, pericardial sac puncture, peritoneal cavity puncture, lumbar puncture, thin-needle biopsy, epidermal tests, intradermal and scarification tests and interprets the results. The student plans specialist consultations; implements basic treatment in acute poisoning; monitors the condition of the patient who is poisoned by chemical substances or drugs; keeps patient's medical records; adheres to the principles of asepsis and antisepsis; inserts peripheral puncture; examines the nipples, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen, and carries out rectal examination; performs basic resuscitation procedures using an automated external defibrillator and other emergency services, and provides first aid; acts in accordance with the current algorithm of advanced resuscitation. The student monitors the postoperative period based on basic life parameters; assesses the condition of the unconscious patient in accordance with applicable international point scales; recognizes the symptoms of increasing intracranial pressure; evaluates indications for suprapubic puncture and participates in its implementation. Draws blood for toxicological tests according to the rules and protects the material for hemogenetic tests.</p>	<p>E.U31. E.U32. E.U33. E.U34. F.U1. F.U4. F.U9. F.U10. F.U11. F.U12. F.U21. F.U22. G.U6. G.U8. G.U9. G.U10. G.U11. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<p><b>Pediatrics – 60 hours after 8th semester</b></p>	<p>2</p>	<p>The student takes medical history from a child and his family; conducts physical examination of a child of all ages; assesses the general condition, the state of consciousness and awareness of the patient; assesses the condition of the newborn with the Apgar score and assesses its maturity, tests newborn reflexes; collates anthropometric and blood pressure measurements with the data on the centile grids; evaluates the stage of puberty; carries out routine health checks; conducts differential diagnosis of the most common diseases of adults and children; assesses and describes the patient's somatic and mental state, recognizes states of immediate threat to life; recognizes the state after consumption of alcohol, drugs and other drugs; plans diagnostic, therapeutic and preventive procedures; analyses the possible side effects of individual drugs and their interactions; proposes the individualization of current therapeutic guidelines and other methods of treatment against ineffectiveness or contraindications to standard therapy; recognizes the symptoms of drug dependence and proposes therapeutic treatment; qualifies the patient for home and hospital treatment; defines states in which the duration of life, functional state or preferences of the patient limit the conduct in accordance with the guidelines set out for the disease, interprets laboratory tests and identifies the causes of deviations; uses nutritional therapy (including</p>	<p>D.U3. D.U13. E.U2. E.U6. E.U8. E.U10. E.U11. E.U12. E.U13. E.U14. E.U15. E.U16. E.U18. E.U20. E.U21. E.U22. E.U24. E.U29.</p>

		<p>enteral and parenteral nutrition); plans how to deal with exposure to a blood-borne infection, qualifies the patient for vaccination, takes samples for tests used in laboratory diagnostics; performs basic medical procedures, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; monitoring of vital signs using a cardiac monitor, pulse oximetry; spirometry, oxygen treatment, assisted and replacement ventilation; oropharyngeal tube insertion; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection; taking swabs from the nose, throat and skin, puncture of the pleural cavity; bladder catheterization in both men and women, nasogastric intubation, gastric lavage, enema; standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation; simple test strips and blood glucose measurement. The student assists in carrying out the following medical treatments and procedures: transfusions of blood and blood-borne products; drainage of the pleural cavity; pericardial sac puncture; peritoneal cavity puncture; lumbar puncture; thin needle biopsy; epidermal tests; intradermal and scarification tests and interprets their results; interprets pharmaceutical characteristics of medicinal products and critically assesses advertising materials about medicines; plans specialist consultations; implements basic treatment in acute intoxication; monitors the condition of the patient poisoned by chemical substances or drugs; recognizes the agony of the patient and declares his death; keeps patient's medical records; adheres to the principles of asepsis and antisepsis; inserts peripheral puncture; examines the nipples, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen, and also carries out rectal examination; performs basic resuscitation procedures using an automated external defibrillator and other emergency services, and provides first aid. During the examination of the child, the student recognizes behaviours and symptoms indicating the possibility of violence against the child. He tries to avoid malpractice in his own actions; draws blood for toxicological tests according to the rules and protect the material for hemogenetic tests.</p>	<p>E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U4. F.U9. F.U10. F.U21. F.U22. G.U6. G.U7. G.U8. G.U9. G.U10. G.U11. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.</p>
<p><b>Surgery – 60 hours after 10th semester</b></p>	<p>2</p>	<p>The student takes medical history from an adult patient; carries out full and targeted physical examination of an adult patient; assesses the general condition, the state of consciousness and awareness of the patient; conducts differential diagnosis of the most common diseases of adults and children; evaluates and describes the patient's somatic and mental state; recognizes states of immediate threat to life; recognizes the state after consumption of alcohol, drugs and other drugs; plans diagnostic, therapeutic and preventive procedures; analyses the possible side effects of individual drugs and their interactions; proposes the individualization of current therapeutic guidelines and other methods of treatment against ineffectiveness or contraindications to standard therapy; recognizes the symptoms of drug dependence and proposes therapeutic treatment; qualifies the patient for home and hospital treatment; defines states in which the duration of life, functional state or</p>	<p>D.U3. D.U13. E.U1. E.U2. E.U3. E.U4. E.U5. E.U6. E.U9. E.U10. E.U11.</p>

		<p>preferences of the patient limit the conduct in accordance with the guidelines set out for the disease; interprets laboratory tests and identifies the causes of deviations; uses nutritional therapy (including enteral and parenteral nutrition); plans how to deal with exposure to a blood-borne infection; takes samples for tests used in laboratory diagnostics; performs basic medical procedures, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; monitoring of vital signs using a cardiac monitor, pulse oximetry; spirometry, oxygen treatment, assisted and replacement ventilation; oropharyngeal tube insertion; intravenous, intramuscular and subcutaneous injections, peripheral vein cannulation, peripheral venous blood collection, blood culture collection, arterial blood collection, arterialized capillary blood collection; taking swabs from the nose, throat and skin, puncture of the pleural cavity; bladder catheterization in both men and women, nasogastric intubation, gastric lavage, enema; standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation; simple test strips and blood glucose measurement. The student assists in carrying out the following medical treatments and procedures: transfusion of blood and blood products, pleural drainage, pericardial sac puncture, peritoneal cavity puncture, lumbar puncture, thin needle biopsy, epidermal tests, intradermal and scarification tests, and interprets their results. The student interprets pharmaceutical characteristics of medicinal products and critically assesses advertising materials about medicines; plans specialist consultations; evaluates pressure sores and applies appropriate dressings; does the right thing in the case of injuries (he puts on a dressing or immobilization, treats and sutures the wound); recognizes the agony of the patient and declares his death; keeps patient's medical records; assists in typical surgery, prepares the surgical field and administers local anaesthesia; uses basic surgical tools; adheres to the principles of asepsis and antisepsis; dresses simple wounds, puts on and changes a sterile surgical dressing; inserts peripheral puncture; examines the nipples, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen, and also carries out rectal examination, evaluates the result of a radiological examination in terms of the most common fracture types, especially long bone fractures; performs temporary limb immobilization, selects the type of immobilization necessary in typical clinical situations and controls the correct blood supply to the limb after applying the immobilizing dressing; stops external bleeding. The student performs basic resuscitation procedures using an automatic external defibrillator and other rescue operations and provides first aid; assesses the condition of the unconscious patient in accordance with applicable international point scales; recognizes the symptoms of increasing intracranial pressure, evaluates indications for suprapubic puncture and participates in its implementation; tries to avoid malpractice in his/her own actions; draws blood for toxicological tests according to the rules and protects the material for hemogenetic tests.</p>	<p>E.U12. E.U14. E.U15. E.U16. E.U17. E.U18. E.U19. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U5. F.U6. F.U7. F.U8. F.U9. F.U10. F.U11. F.U12. F.U21. F.U22. G.U6. G.U7. G.U8. G.U9. G.U10. G.U11. K.S1. K.S2. K.S3. K.S4.</p>
--	--	--	--



			K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>Gynecology and obstetrics – 60 hours          after 10th semester</b>	2	<p>The student takes medical history from an adult patient; carries out full and targeted physical examination of an adult patient; assesses the general condition, the state of consciousness and awareness of the patient; assesses the condition of the newborn with the Apgar score and assesses its maturity, tests newborn reflexes; performs differential diagnosis of the most common diseases of adults and children; assesses and describes the patient's somatic and mental state, recognizes life-threatening states; plans diagnostic, therapeutic and preventive procedures; proposes the individualization of existing therapeutic guidelines and other methods of treatment against ineffectiveness or contraindications to standard therapy; qualifies the patient for home and hospital treatment; defines states in which the duration of life, functional state or preferences of the patient limit the conduct in accordance with the guidelines set out for the disease, interprets laboratory tests and identifies the causes of deviations; plans how to deal with exposure to a blood-borne infection; takes samples for tests used in laboratory diagnostics; performs basic medical procedures, including: body temperature measurement, pulse measurement, non-invasive measurement of blood pressure; monitoring of vital signs using a cardiac monitor, pulse oximetry; bladder catheterization in both men and women, nasogastric intubation, gastric lavage, enema. The student assists in carrying out the following medical treatments and procedures: transfusion of blood and blood-borne products, peritoneal cavity puncture, lumbar puncture, thin needle biopsy, epidermal tests, intradermal and scarification tests, and interprets their results. The student plans specialist consultations; recognizes the agony of the patient and declares his death; keeps patient's medical records, assists in typical surgery, prepares the surgical field and administers local anaesthesia; uses basic surgical tools; adheres to the principles of asepsis and antisepsis; inserts peripheral puncture; performs basic resuscitation procedures using an automated external defibrillator and other emergency services, and provides first aid; recognizes signs and symptoms that indicate an abnormal pregnancy (abnormal bleeding, uterine contractions); interprets the results of physical examination of a pregnant woman (arterial pressure, heart function) and the results of laboratory tests indicating pregnancy pathologies. The student interprets cardiotocography (CTG) results; recognizes the beginning of labour and its incorrect duration; interprets signs and symptoms during the childbirth; establishes recommendations, indications and contraindications for the use of contraceptive methods, tries to avoid malpractice in his/her own actions.</p>	D.U3. D.U13. E.U1. E.U3. E.U4. E.U5. E.U7. E.U9. E.U10. E.U12. E.U14. E.U15. E.U16. E.U18. E.U20. E.U21. E.U23. E.U24. E.U25. E.U26. E.U27. E.U28. E.U29. E.U30. E.U31. E.U32. E.U33. E.U34. F.U1. F.U2. F.U3. F.U4. F.U8. F.U9. F.U10. F.U13. F.U14. F.U15.

			F.U16. F.U17. F.U18. F.U19. F.U21. F.U22. G.U5. G.U6. G.U7. G.U8. G.U9. G.U10. G.U11. K.S1. K.S2. K.S3. K.S4. K.S5. K.S6. K.S7. K.S8. K.S9. K.S10. K.S11.
<b>total</b>	<b>368</b>		

#### 14. METHODS OF VERIFICATION AND ASSESSMENT OF LEARNING OUTCOMES ACHIEVED BY THE STUDENT DURING WHOLE STUDIES:

Methods of verification and assessment of learning outcomes are coherent with the recommendations given in the education standards for medicine in the *Ordinance of the Minister of Science and Higher Education of 26th July 2019 concerning standards of education preparing for the profession of a doctor, dentist, pharmacist, nurse, midwife, laboratory diagnostician, physiotherapist and paramedic (Journal of Laws No. 2021, item 755, as amended)*.

1. Verification of achieved learning outcomes requires the use of various forms of testing which should be adequate for the scope of knowledge, skills and social competences to which outcomes refer.

2. Achieved learning outcomes within the scope of knowledge can be verified with written or oral exams.
3. Written exams could take the form of essays, reports, short structured questions, multiple choice questions (MCQ), multiple response questions (MRQ), choice tests Yes/No or answers matching.
4. Exams should be standardized and are targeted at verifying knowledge at the level higher than knowing particular issues only (the level of understanding issues, analytical skills and information processing as well as problem solving).
5. Verification of achieved learning outcomes within the scope of skills in professional communication with patients in class of groups D, E and F is carried out in the form of a practical examination conducted in simulated conditions, including the participation of a simulated patient, or in clinical conditions, using observation cards or checklists.
6. Verification of the achieved learning outcomes in the skill categories in groups E, F and H requires direct observation of a student demonstrating the skill during a traditional clinical exam and a standardized exam (Objective Structured Clinical Examination, OSCE). The OSCE exam is required as a form of verification of learning outcomes in the skill category achieved during the entire period of study and takes place in the 6th year of studies.

Procedures providing the quality of education at the University are based on the guidelines described in legal acts regarding the Internal System for the Quality of Education. The main (directional) learning outcomes, included in the standard for the medical faculty, are implemented during individual courses. Compliance and implementation of outcomes is constantly verified by the Directional Team of Teaching Programmes for the field of medicine.

Verification of effectiveness of achieving the assumed learning outcomes is done by:

- 1) Assessment of the course description and verification of the assumed detailed learning outcomes within the scope of knowledge, skills and social competences during individual courses;
- 2) Student internships – learning outcomes achieved during student internships are a complement to the education concept. The verification of outcomes takes place in accordance with the regulations of internships of individual faculties and the procedures of completing and documenting student internships. Student internships help to verify outcomes achieved during other courses and improve students' skills. The outcomes are verified according to the criteria included in the course description;
- 3) International student exchange – obtaining information from students about their knowledge, skills and social competences with reference to staying at a partner university;
- 4) Achievements of scientific organizations – feedback through external reviews (scientific publications, speeches at conferences, scholarship granted by the Rector and the Minister);
- 5) Graduate surveys – getting feedback concerning acquired knowledge, skills and social competences and their usefulness on the labor market and cooperation with the Academic Career Office in monitoring graduates' careers;
- 6) Employer opinion surveys – employers' opinions concerning training programmes, including assumed learning outcomes and methods of verifying them, especially regarding practical training;
- 7) Verification of classes preparing students to acquire in-depth knowledge and skills of conducting scientific research and using scientific achievements in practical activities.

The scope and level of assumed learning outcomes are verified systematically throughout the entire course of study through:

- 1) Constituent work – done by the student during whole studies: tests, final papers, reports, presentations, project – according to the tutor’s instructions. All forms of credit are carried out on the basis of established principles;
- 2) Ccredit and credit with grade – tutor determines grades criteria, gives their components and explains the grade obtained by the student. The grading criteria and their components are specified in the course description;
- 3) Exams – questions prepared are consistent with the content of individual courses and are based on the standars determined for the field of medicine. Exam forms used in medicine: written, oral, practical. Exams are standardized and are aimed at checking knowledge, the ability to understand and analyze issues and solve clinical problems. The exam is carried out in the didactic room, in which it is possible for students to take seats in such a way as to work independently and in comfort. The person conducting the exam has the right to interrupt or annul the exam if the student's work is not independent (the student uses unauthorized materials, devices and other people's help);
- 4) Practical medical examination in the 6th year of studies carried out using the OSCE method – taking place in the rooms of the Medical Simulation Center, is a form of verification of learning outcomes in the scope of skills achieved during the entire period of studies. Details regarding the organization and conducting of the practical examination are specified in the Regulations of the Objective Structured Clinical Examination for medical studies;
- 5) Evaluation of examination session results. Student results from each examination session are analyzed in quantitative and qualitative terms and are used to improve teaching process;
- 6) Students’ periodic assessment of classes. The results obtained from surveys are discussed in general terms at the meetings of the Institute's employees. Individual assessments of the Institute's research and teaching staff are presented directly to the people concerned in accordance with data security rules, and are then discussed and analyzed in terms of improving the quality of education;
- 7) Classes observations made by the Head of the Institute or heads of units;
- 8) Close cooperation of employees who conduct various forms of classes within a given course or group of courses;
- 9) Systematic control of learning outcomes in the form of papers, tests, students' projects. The results are available to students and discussed in detail during classes and consultations.

**Forms and methods of conducting classes as well as grade criteria and their components are specified in the course description. All forms of verification of student achievements obtained during classes in particular semester are recorded in the student's periodic achievement sheets.**