

## GENERAL MEDICINE IN ENGLISH – 1 YEAR

Each student is required to earn 1 credit (ECTS) during the year

List and annotations of elective courses for students to choose from

No	Name of elective courses	Credits	Annotations
1	Tropical Parasitology (Department of Medical Biology)	1	The proposed elective course program in medical Parasitology is based on the fact that there are not enough hours for students of the 2nd year of the medical faculty to study the full program of Parasitology. The purpose of the elective course is to improve the quality of training and expand student knowledge of Tropical Parasitology. Elective course in medical Parasitology includes the study of morphology, features of development cycles, distribution of parasites of tropical climate, as it is most favorable for the existence of parasites. The parasites of the tropical zone is the most diverse and numerous. Many parasitic protozoa, helminths, and arthropods are found only in this zone.
2	Vascular and Nerve Discharge Options in the Pelvic Cavity (Department of Normal and Topographic Anatomy)	1	Deep knowledge of various aspects of anatomy allows students to use their knowledge in clinical departments, in practical activities, in particular in the clinic. It is necessary to study in detail the features of blood supply to the pelvic organs, depending on the gender of individual and age.
3	Nanotechnology in Medicine (Department of Physics, Mathematics and Computer technology)	1	In modern aspects, medicine requires strengthening the preventive focus of health care, improving the quality of medical care and also availability of precise diagnostic equipment in health facilities. To solve these problems, it is necessary to train specialists with good professional knowledge and practical skills. In addition to physical research methods (electromagnetic fields, ultrasound, elementary particles, etc.) of biological objects, it is important to create new methods of diagnosis and treatment in medicine. Their range includes nanotechnology.
4	The Autonomic Nervous System - the Regulator of the Functional Systems of the Human Body (Department of Fundamental and Clinical Physiology)	1	The elective course "Autonomic nervous system - the regulator of the functional systems of the body" for the discipline Normal physiology contains lecture material, tasks for practical classes and a list of questions for students' independent work. The course material reflects in detail the anatomical structure of the ANS divisions, their physiological effects on important body systems. The classification and features of the action mechanisms of mediators of the sympathetic, parasympathetic and metasymphathetic divisions of the ANS are presented. The practical part is presented by autonomic reflexes of the cardiovascular, respiratory and other systems, which

			students should master. This course integrates basic knowledge of physiology with clinical disciplines (neurology, cardiology, internal medicine).
5	Russian Language in the Field of Professional Activity  (Department of Russian Language)	1	The purpose of mastering the discipline is to improve the communication skills of foreign medical students in the field of professional communication (written and oral) in Russian. Russian language in the field of professional activity" is a discipline of the students' choice and refers to the humanitarian, social and economic cycle. The discipline assumes that students have a basic level of knowledge of Russian.

## GENERAL MEDICINE IN ENGLISH – 2 YEAR

Each student is required to earn 3 credits (ECTS) during the year

List and annotations of elective courses for students to choose from

<b>N<sub>o</sub></b>	<b>Name of elective course</b>	<b>Credits</b>	<b>Annotation</b>
1	Clinical and Microbiological Diagnostics of Health Care-associated Infections (HAIs)  (Department of Microbiology, Virology and Immunology)	1	Health care-associated infections (HAIs) are caused by bacteria, viruses and fungi. Health care-associated infections (HAIs) are infections people get while they are receiving health care for another condition. Bacteria, fungi, viruses or other less common pathogens can cause HAIs. HAIs are a significant of illness and death – and they can have serious emotional, financial and medical consequences.
2	Biochemical Mechanisms of Metabolic Disorders and Main Biochemical Markers  (Department of Biochemistry with a Course of General and Bioorganic Chemistry)	2	This course allows students to understand that any disease begins with a metabolic disorder in a cell, then spreads to tissue, an organ and the whole organism, and that a metabolic disorder leads to a violation of homeostasis in the biological fluids of the human body, which is accompanied by a change in biochemical parameters. Students will appreciate the role of biochemical research in diagnosing, predicting diseases and evaluating the effectiveness of treatment.
3	Care for Development of Children of Preschool Age  (Department of Propaedeutic Pediatrics)	1	The main elements of the education of children of preschool age. The use of various methods for the development of a preschool child – the development of memory, thinking, motor skills, speech. Recommendations for child development by age group (work in the Department of hospital and preschool institutions). Communication skills and counseling mothers.
4	Pathological Anatomy of Fetal and Newborn Diseases.  (Department of Pathological Anatomy)	1	The purpose of the course of pathological anatomy of fetal and newborn diseases is to study the structural basis of these diseases, their etiology, pathogenesis and morphogenesis in order to use the knowledge gained in training at clinical departments for training a general medicine specialist.

			medical worker and other people, patients, and colleagues. At present, many people experience tension, instability, insecurity, which often lead to difficulties in communication.
5	Medical Ethics and Deontology  (Department of Public Health and Healthcare)	2	The course introduces students to the unique ethical aspects of the medical profession, which are considered from the perspective of medical ethics and deontology, the direction of bioethics concerning moral problems in medical practice. The course is based on classical knowledge and modern achievements in the field of medical ethics and deontology, enshrined in national and international ethical standards. The study of medical ethics and deontology plays an important role in the training of highly qualified medical personnel. The method of ethical reflection teaches students to recognize ethical problems and make balanced and reasoned professional decisions, considering and analyzing ethical issues in a rational and principled manner in their interaction with colleagues, patients and their guardians, society in the practice of a doctor. As a result of the training, students will gain knowledge and skills capable of ensuring high professionalism and a worthy place in interdisciplinary discussions about professional duty, duties, right and welfare, meeting their needs in preparation for the worthy fulfillment of the mission of providing quality medical care to the population.
6	Medical English Terminology  (Department of Foreign and Latin Languages)	2	Teaching English at the Medical Academy is the main part of the general training program for future qualified doctors. The main goal is to form the communicative competencies of the English language of the future specialist- doctor, allowing the use of English as an information medium, professional and interpersonal communication. This course also emphasizes the study and use of medical terminology and focuses on the development of all areas of speech, listening, writing, grammar and reading skills.
7	Pathophysiology of the adaptation syndrome and stress  (Department of Pathological Physiology)	1	This course will study the most non-specific general mobilization response of the body to any stimulus that threatens homeostasis in real, potential, or even just unexpected. The causes of the adaptation syndrome and stress, as well as the anti-stress mechanisms of the body, and the principles of stress correction will be considered in detail.
8	Biochemical Aspects of Carcinogenesis  (Department of Biochemistry with a Course in General and Bioorganic Chemistry)	1	The purpose of this elective course is to expand and systematize student's knowledge about the biochemical basis of carcinogenesis and its consequences. The following issues will be considered: sources and ways of spreading carcinogenic factors in everyday life (bad habits-Smoking), at work, in the environment - factors that contribute to carcinogenesis: physical, chemical, biological or oncoviruses. Major chemical carcinogens. Mechanisms and markers of carcinogenesis. Critical stages of development of carcinogenesis. Features of the metabolism of tumor cells.

9	The Effective Communications in Medical Activity  (Department of Psychology, Psychiatry and Narcology)	1	The elective course “Effective communications in medical activity” is aimed at developing practical communication skills of students, the acquisition of theoretical knowledge and practical skills in the process of building medical communications. The subject of study is a system of relationships between a medical worker and other people, patients, and colleagues. At present, many people experience tension, instability, insecurity, which often lead to difficulties in communication.
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## GENERAL MEDICINE IN ENGLISH – 3 YEAR

Each student is required to earn 7 credits (ECTS) during the year

List and annotations of elective courses for students to choose from

<b>№</b>	<b>Name of elective course</b>	<b>Credits</b>	<b>Annotation</b>
1	Basics of Infection Control in Health Care Organizations  (Department of General and Clinical Epidemiology)	2	Infections associated with the provision of medical care are an actual problem for practical health care, reducing the quality of medical care and increasing the social time of illness. A large proportion of nosocomial infections is associated with carrying out imported diagnostic and therapeutic procedures. Future health care practitioners should have a good understanding of the basis for preventive measures related to medical care.
2	Modern Problems of Immunoprophylaxis  (Department of General and Clinical Epidemiology)	2	Immunization of the population plays an important role in the prevention of infectious diseases, which is indisputably proved by its results. During the period of formation and development of immunoprophylaxis, new technologies for obtaining vaccines have been developed, schemes and methods of administration have been improved. Knowledge of the basics of the organization of vaccinations and new directions in the development and production of immunobiological drugs is necessary for future public health professionals.
3	Rare Hemispheric Syndromes  (Department of Neurology)	1	This elective course examines the functional differences of the right and left hemispheres of the brain. The practical thematic plan includes topics of neurophysiological relevance in modern literary sources, such as emotional intelligence and emotional memory and some types of thinking – figurative, associative, abstract.
4	Modern Diagnostics, Treatment and Prevention of Dyslipidemias  (Department of Faculty Therapy)	1	In this elective course, students will study the classification of dyslipidemias, methods of their non-drug treatment, prevention of cardiovascular diseases, the concept and diagnostic criteria of familial hypercholesterolemia, learn to determine the overall risk of CVD, and interpret laboratory indicators of dyslipidemias.
5	The Basics of Specific Surgical Infections  (Department of Propaedeutic Surgery)	1	For a long time, the issues of diagnosis and treatment of specific surgical infections remained unsatisfactory. And only with the introduction of modern diagnostic methods and specific prophylaxis of some acute diseases into practice, have the treatment results improved. In recent years, cases of the disease with certain chronic specific infections have become more frequent, therefore issues of early diagnosis and appropriate preventive measures are important in predicting the course of specific infections.

6	Practical Basics of Ultrasound Diagnostics (Department of Radial Diagnostics and Treatment)	1	The presented elective course is devoted to the in-depth study and application of ultrasound diagnostics in various areas of medicine. There will be an analysis of frequently occurring ultrasound examinations using the Doppler mode in gastroenterology, urology, nephrology, angiology and endocrinology. Coverage of ultrasound normal anatomy in various age categories and pathology is mandatory. Practical training on ultrasound devices is provided.
7	Operative Surgery of Mediastinum (Department of Hospital Surgery)	1	Damage of the mediastinum can be opened or closed with internal hemorrhage and with the formation of a hematoma that can lead to compression of vital organs. Acute mediastinitis is an acute purulent inflammation of the mediastinal tissue, appears in the form of phlegmon or abscess. Most often, acute mediastinitis occurs as a result of open damage of the mediastinum, perforation of the esophagus by a foreign body, spread of deep phlegmon of the neck into the mediastinal tissue. Mediastinal tumors and cysts are found in the mediastinum. By the origin, tumors of the mediastinum can be neurogenic, mesenchymal, tumors from the reticular tissues of the lymph nodes and thymoma. Surgical treatment is directed primarily to eliminate the cause of acute mediastinitis or removal of tumor and etc.
8	Emergency Otorhinolaryngology (Department of Otorhinolaryngology)	1	The program envisages the study of theoretical and practical skills to diagnose and provide timely and immediate assistance to patients in various States and surgery such as: trauma, foreign body ENT, epistaxis, stenosis of the larynx of various genesis, burns of the pharynx and esophagus, paratonsillar abscesses, and abscesses of other etiology, etc.). Special attention will be paid to developing basic techniques and methods of emergency ENT patients, namely - working with models (holding the front and rear nose tamponade, technique of tracheotomy, etc.), visual aids.
9	Valeology (Department of General Hygiene)	1	The purpose of the discipline: students gain knowledge, skills and abilities for the formation, preservation and promotion of health by studying and using the laws of health formation and developing ways to model and achieve a healthy lifestyle. The program provides for the study of the basics of a healthy lifestyle, environmental factors of its components, natural and anthropogenic aspects.
10	Mental Hygiene (Department of General Hygiene)	1	Elective courses on mental hygiene created conditions for obtaining knowledge and competencies for students to create and strengthen the mental health of the population, including the creation of conditions for children's mental functioning. Mental hygiene is a section of hygiene that conducts activities to preserve and strengthen a person's mental health. The purpose of teaching elective courses in mental hygiene is to acquire knowledge, skills and abilities to increase the stability of mental health and resistance to various harmful environmental factors and to prevent the development of initial forms of mental illness and their relapse in patients.

11	Age Physiology and Eye Pathology (Department of Ophthalmology)	1	Knowledge of ophthalmological techniques for studying the visual organ will make it possible to timely prevent complications associated with a decrease in visual functions. During practical classes, students will receive information on the General semiotics of diseases of the visual organ, learn basic practical techniques for better viewing the retina in diseases such as arterial hypertension, atherosclerosis and central nervous system damage.
12	Violation of Sexual Differentiation (Department of Urology)	1	The purpose of the elective course: to form student's knowledge about diseases of the male reproductive system, violation of sexual differentiation, causes of male infertility, factors contributing to the development of erectile dysfunction, as well as modern methods of diagnosis and treatment in andrology.



**GENERAL MEDICINE IN ENGLISH – 4 YEAR****Each student is required to earn 4 credits (ECTS) during the year****List and annotations of elective courses for students to choose from**

<b>№</b>	<b>Name of elective course</b>	<b>Credits</b>	<b>Annotation</b>
1	Liver Transplantation: Definition, Indications and Post-transplant Management of Patients  (Department of Faculty Surgery)	1	The main goal of this course in liver transplantation is to increase student's knowledge of the most important sections of liver transplantation. Training in this elective course will allow students to acquire more extensive and in-depth knowledge, get acquainted with the latest technologies and methods of liver transplantation.
2	The Basics of Laparoscopic Technologies in Surgery  (Department of Faculty Surgery)	1	The course provides students with new theoretical knowledge and practical skills and covers types of specialized assistance in the basics of laparoscopy. Practical activities include: - tissue stitching under endovideocamera control; - intracorporeal knot tying; - extracorporeal knot formation; - performing laparoscopic (macropreparation of cattle) visual diagnostics and biopsy; performing laparoscopic (macropreparation of cattle) appendectomy and cholecystectomy.
3	Emergency Neurosurgery for Violent Injuries in Peacetime  (Department of Neurosurgery)	1	In this elective, the main parameters of the most common weapons will be considered, most of which are either legalized for use for self-defense, or are made underground. The ballistics and characteristics of injuries from a particular weapon will also be studied. However, the main purpose of this course is to review the provision of primary medical care at the scene of the accident, at the SMP point, and to introduce the patient to secondary and tertiary hospitals. As a result, referring to the improvement of scientific and technological progress and dense urbanization with an increase in the number of people in urban areas, this elective course should provide the minimum necessary overview for students to introduce the category of patients whose frequency will only grow.
4	Emergency States in Neurology  (Department of Neurology)	1	The elective course on the subject of "Emergency states in neurology" is included in the block of clinical disciplines and is intended to familiarize future general practitioners with related nosologies found in both the practice of the neurologist and in other disciplines. This course covers the most common pathologies of the nervous system and requiring emergency care. It displays the main clinical and paraclinical criteria for the diagnosis of emergency conditions in neurology.

5	Microcrystalline Arthritis  (Department of Hospital Therapy)	1	The relevance of this elective is that today the number of patients with metabolic disorders is growing, which consequently leads to an increase in metabolic diseases. For GP doctors, this is important because there is a hypodiagnosis or association of these diseases under gout, although individual microcrystalline arthritis has a specific diagnosis, treatment and management. The lecture course presents the most relevant and complex issues in terms of identifying rare metabolic disorders, in particular pyrophosphate and hydroxyapatite arthropathies. Practical classes will focus on the analysis of the pathogenesis of certain forms of salt metabolism disorders. An important point in training is to compare the clinical manifestations of diseases at all stages of their development, which will allow students to instill skills in clinical analysis and diagnostic signs.
6	Constipation, Problems. Differentiated Therapy of Constipation  (Department of Propaedeutic Therapy)	1	Constipation is an important medical and social problem that is often faced by practitioners: internists, General practitioners-family medicine, gastroenterologists. The quality of life of patients suffering from chronic constipation is comparable to the quality of life of patients with diabetes, hypertension and depression. Practical doctors often do not know modern methods of examination, find it difficult to treat patients with chronic constipation. This elective course is designed to provide modern assistance to a general practitioner. Timely recognition of basic clinical and laboratory-instrumental signs of constipation is important.
7	Thyroid Gland and Pregnancy  (Department of Propaedeutic Therapy)	1	Reflects basic approaches to solving problems of thyroid diseases in pregnant women according to disciplinary tasks, including the usual treatment regimens for uncomplicated cases.
8	Prevention of Venous Thromboembolic Complications During Pregnancy, Labor, and the Postpartum Period  (Department of Obstetrics and Gynecology)	1	The purpose of the elective course is to acquire practical skills and skills to assess and document risk factors for venous thromboembolic complications before and during pregnancy, as well as to conduct thromboprophylaxis, which will prevent maternal morbidity/mortality due to thrombosis during pregnancy, labor and in the postpartum period.
9	Practical Essentials of Management of Pregnancy and Childbirth in Rare Diseases of the Kidneys, Liver and Brain.  (Department of Obstetrics and Gynecology)	1	The presented elective course is devoted to the in-depth study and expansion of practical knowledge and skills in the management of pregnancy and childbirth in patients with a single kidney, brain and liver diseases, depending on clinical manifestations and laboratory diagnostic indicators.
10	The Role of Assisted Reproductive Technologies in Family Planning	1	The purpose of the elective course "Role of assisted reproductive technologies in family planning" is to study the possibilities of modern medicine, in particular art methods, in solving problems with the onset of long-awaited pregnancy and the birth of healthy offspring, to consolidate knowledge of the course and tactics of

	(Department of Obstetrics and Gynecology)		pregnancy after extracorporal fertilization (IVF), the choice of delivery method. As a result of completing the elective course, students will know the main types and methods of art, indications for IVF, preparation for IVF, selection and examination of patients, IVF complications, features of pregnancy due to IVF, features of pregnancy management after IVF, hormonal support, methods of delivery of women whose pregnancy occurred after IVF.
11	Special Features of Intestinal Sutures in Complicated Forms of Acute Surgical Diseases of the Abdominal Organs  (Department of Hospital Surgery)	1	Quite often in abdominal surgery, operations such as resections of the small and large intestines are performed. At the same time, to restore the patency of the gastrointestinal tract, it is necessary to form an inter-intestinal anastomosis. Failure to comply with the principles of abdominal surgery, in particular-the requirements for intestinal sutures, leads to very serious consequences.
12	Dysplastic Disorders in Orthopedics  (Department of Traumatology and Orthopedics)	1	Dysplasia is currently considered to be a violation, improper development of tissues, organs or parts of the body. The causal factors are numerous and not fully understood. In orthopedics, dysplastic disorders occur in the form of scoliotic disease, torticollis, flat feet. Relevance: late diagnosis and as a result, late treatment, lack of proper preventive measures at the initial stage of the disease in the future lead to disability of patients already in early childhood. Further, these patients in the adult state remain disabled and permanent chronic patients of orthopedists, therapists, which requires certain material costs. The Department offers an elective course for students of the 6th year in the form of lectures and practical classes. During the training course, the Department's assistants will present the main theoretical aspects of diseases, and students will learn skills in early diagnosis, prevention, and treatment of dysplastic disorders in orthopedics.
13	Basics of Genital Surgery  (Department of Urology)	1	Genital surgery is a separate area in modern reconstructive plastic surgery and urology, which involves various surgical interventions on the genitals. The development of genital surgery has been quite recent, after the separation of such a direction as andrology from General urology, i.e. the science of men. The field of interest of genital surgery includes surgical procedures performed on the penis, scrotum, testicles, and urethra. Penile and urethral surgery is a priority and the most dynamically developing area. The penis is a unique organ that performs 3 main functions: copulatory (sexual), reproductive and urination. Biomechanical features of the cavernous bodies of the penis and its ligamentous apparatus, the anatomical unity of the erectile tissue and urethra, the unusual relationship of the skin and fascial layers, all this requires special surgical approaches and techniques. To get a good functional and aesthetic result of the operation, you need to know urology, use the principles of plastic surgery, microsurgery and implantology. The new concept of treatment of surgical diseases of the penis has led to the need to distinguish three areas in operative andrology-

			reconstructive, implantation and aesthetic surgery of the penis, which are interrelated and complementary to each other.
14	Introduction to Sexual Medicine (Department of Urology)	1	Sexual and reproductive health plays a significant role for each individual, society and the state. These are issues of development, reproduction and quality of life, which are the right of every person. Sexual health is a state of physical, mental, and social well-being in relation to sexuality; it is not simply the absence of disease, dysfunction, or infirmity. Sexual health implies a positive and respectful attitude towards sexuality and sexual relations, the ability to safely lead a satisfying sexual life, and the absence of coercion, discrimination, and violence. Erectile dysfunction (ED) along with premature ejaculation are the most common problems of male sexual health. ED is a very common disease, as it occurs in 52% of men aged 40-70 years. ED does not threaten the patient's life, it is a serious psychological and physiological problem, despite the fact that currently the relationship between the quality of intimate life and General health and even life expectancy is shown. ED can be based on various causes – psychological, neurological, endocrinological, vascular – arterial and related to the violation of the functioning of the cavernous bodies, or a combination of the above factors. In connection with the above, the role of andrology in the educational process has also increased. The program of the elective course on andrology "Introduction to sexual medicine" provides continuity of teaching related theoretical and clinical disciplines (urology, gynecology, endocrinology, cardiology, etc.), eliminating duplication of material.
15	Stigma and Discrimination: Adherence to Treatment of Tuberculosis (Department of Phthisiology)	1	The purpose of the discipline: students acquire the knowledge necessary for the management of patients in compliance with the ethical and deontological standards of behavior of a general practitioner in the identification and diagnosis, prevention, prevention and treatment of patients with tuberculosis.
16	Emergency Conditions, Palliative Care and Rehabilitation of Oncologic Patients. (Department of Oncology)	1	According to WHO data, more than 8 million primary cancers are registered worldwide every year and about 7 million die from cancer (in terms of annual mortality, malignant tumors rank second in the world after cardiovascular diseases). Analysis of statistical data for Kyrgyzstan shows a trend towards an increase in morbidity and mortality rates for most localities of malignant neoplasms. At the same time, it should be noted that there remains a high proportion of newly identified patients with advanced stages of the cancer process. The program highlights modern methods of treatment of complications of malignant neoplasms of the main localization, palliative therapy. Issues of rehabilitation of oncologic patients remain important. With modern approaches, rehabilitation care provided improves the quality of life of oncologic patients.

17	Children's Allergology (Department of Hospital Pediatrics)	1	Allergic diseases in children in modern conditions are becoming increasingly important the general practitioner is experiencing difficulties in the diagnosis and management of children with these diseases due to the lack of information support and basic knowledge of pediatric allergology. The purpose of this elective course is to deepen and supplement the basic knowledge of this section of Pediatrics, focusing on practical issues of diagnosis and management of allergic diseases in children.
18	Arterial Hypertension in Children (Department of Hospital Pediatrics)	1	Treatment and especially prevention of arterial hypertension in children are currently at a very low level. As a rule, arterial hypertension is diagnosed already in people of working age, when complications form and regular medication is required, and preventive measures are insufficient. It should be noted that prevention and treatment of arterial hypertension in childhood can prevent the transformation of arterial hypertension into ischemic and hypertensive diseases, which are the main cause of disability and mortality in the adult population.

**Координатор факультета “ЛДАЯО”**

**Давыдов В.Т.**