

**Student-choice courses for the 2018-2019 academic year.**

**Specialty: "Pediatric"**

**2nd year. Each student is required to complete 7 credits (ECTS) during the year.**

List and summary of elective courses for students' choice

**1. Topic: Cellular basis of immune processes** (rel. Department of Histology, Cytology and Embryology)

**Number of credits** – 1 credit

**Final control-** testing

Content: The elective course provides a deeper knowledge of blood cells obtained in the course of studying the basic program, and the forming of a conscious attitude to maintaining one's own health

**2. Topic: Medical Geography** (resp. Department of Public Health and Healthcare)

**Number of credits** – 1 credit

**Final control-**testing

Contents: Medical geography is a scientific discipline that studies the impact of natural, economic and social conditions of various territories on the health of the people inhabiting them. The main goal is to assist society in improving, including improving, the living environment of the population in order to achieve the highest level of health.

**3. Topic: Tropical Parasitology** ( Department of Medical Biology, Genetics and Parasitology)

**Number of credits** – 1 credit

**Final control-** testing

Content: The aim of the course is to expand students' knowledge of morphology, features of development cycles, distribution of tropical climate parasites, their pathogenic effect, and measures to protect human health from parasites.

Large population migration to different parts of the world, the arrival of foreign students from different countries, the presence of transit hosts of parasites and vectors they suggest the expansion of the range of parasites and the need for additional knowledge on tropical parasitology.

**4. Topic: Information and communication technologies in medicine** (Department of Physics, Mathematics, Computer Science and CT)

**Number of credits** – 1 credit

**Final control-**testing

Content: Formation of students' general ideas about the possibilities of using the Internet. facilities

information and communication technologies

that provide broad opportunities for processing medical information, mastering the techniques of working with modern standard application software packages.

**5. Topic: Features of indicators and mechanisms of regulation of functional systems of the child's body** (resp. Fundamental and clinical departments, physiology)

**Number of credits** – 1 credit

**Final control-testing**

Content: The content of the elective course provides for familiarizing students with the age-related periodization of human development and studying the age-related features of blood, cardiovascular, respiratory, digestive, and urinary systems. and nervous systems.

**6. Topic: Free radicals and antioxidants. The struggle between evil and good** (rel. biochemistry with a course in general and bioorganic chemistry)

**Number of credits** – 1 credit

**Final control-testing**

Content: This elective course will allow the student to understand the essence of free radical oxidation processes in normal and pathological conditions and open the "door" to the world of antioxidants, which is important for the future pediatrician.

**7. Topic: Nanotechnology in Pediatrics** ( Department of Physics, Mathematics, Computer Science and CT scans)

**Number of credits** - 1 credit

**Final control-testing**

Content: The main focus of students is on new and up-to-date methods of prevention, diagnosis and treatment of diseases of young patients. These include laser therapy, radiation diagnostics and nanotechnology, etc., without which modern medicine and healthcare are incomplete. Nanoscale technology ( $1\text{nm}=0.000000001\text{ m}$ )—this molecular components interactions of bio-structures, correction on the thin structure," on the root " of bio systems and the child's body, which allow detecting pathological processes at the very beginning..  
Total labor intensity: 1 credit. (4th semester).

**8.Topic: The role of biogenic elements in the human body.** biochemistry with a course in general and bioorganic chemistry)

**Number of credits** - 1 credit

**Final control-testing**

Content: Formation of students ' system of natural science knowledge about the chemical and biological properties of biogenic elements, the presence and transformations of which form the molecular basis of the body's vital activity.

**9.Subject: Speech culture** (resp. Department of Kyrgyz language)

**Number of credits** - 1 credit

**Final control-testing**

Content: Aimed at forming a speech culture while teaching Kyrgyz language, to speak logically correct, to enrich the vocabulary, to write grammatically correct, to teach correctly fill in the documents and to deepen the professional knowledge.

**10. Topic: Fundamentals of Nursing** (resp. Department of Nursing)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of the course is to introduce students to the methods and principles of proper implementation of nursing care and assessment of the condition of patients in hospitals, skills in providing emergency pre-medical care to patients.

**3rd year. Each student is required to *complete 12 credits* (ECTS) during the year.**

**1.Topic: Psychohygiene** (resp. Department of general hygiene)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of the course is to gain knowledge, skills and abilities to increase the stability of mental health and resistance to various harmful environmental factors and prevent the development of initial forms of mental illnesses and their relapses in patients.

**2.Topic: Type 1 diabetes mellitus in adults.** (resp. Department of propaedeutics of internal diseases)

**Number of credits** - 1 credit

**Final control-testing**

Content: The student's ability to recognize the basic clinical and laboratory-instrumental signs of hyperglycemia syndrome in a timely manner and, taking into account, both children and adults with clinical manifestations of hyperglycemia syndrome and with already developed complications apply to general practitioners. The program also takes into consideration the clinical manifestations of target organ damage in adults.

**3. Topic: Quantitative and qualitative assessment of health.**

**Health diagnostics.** ( resp. Department of Fundamental and Clinical Physiology)

**Number of credits** – 1 credit

**Final control-testing**

Content: The purpose of the CPV is to introduce the modern definition of health, its qualitative and quantitative characteristics, risk factors, and methods for predicting, maintaining, and strengthening health. features of students ' lifestyle and work will be considered. The knowledge gained will contribute to a better assimilation of the discipline of public health.

**4. Topic:**

**Pathological anatomy diseases perinatal care and prenatal periods.** (resp. Department of pathological anatomy)

**Number of credits** - 1 credit

**Final control-testing**

Contents: study of the structural foundations of diseases of the perinatal and prenatal periods, their etiology, pathogenesis and morphogenesis; comparison of morphological and clinical manifestations of the disease at all stages of their development.

**5. Topic: Basic elements of preschool children's development.** (resp. Department. propaedeutics of children's diseases)

**Number of credits** - 1 credit

**Final control-testing**

Content: The aim of the course is to teach students the skills of observation and assessment of child development, methods of cognition of the world, using mother's counseling, observation, recommendations for age groups.

**6.Topic: Microbiological diagnostics of nosocomial infections.**

(Department of Microbiology, Immunology and Virology)

**Number of credits** - 1 credit

**Final control-testing**

Content: The aim of the program is to develop students ' theoretical and practical skills for microbiological diagnostics and prevention of nosocomial infections in medical organizations.

**7. Topic:** Diagnostics and semiotics of post-traumatic dislocations in children under 3 years

of age (rel. Department of Pediatric Surgery)

**Number of credits** – 1credit

**Final control-testing**

Content: The aim of the course is to introduce students to the main symptoms and diagnosis of post-traumatic dislocations in children under 3 years of age.

**8. Subject:** Problems and prospects of the organization of vaccination

business. Department of General

and Clinical Epidemiology)

**Number of credits** – 1credit

**Final control-testing**

Content: The purpose of the course is to study the basics of organizing vaccinations and new directions in the development and production of immunobiological drugs

**9.Topic: Topical issues of radiation diagnostics in pediatrics.** (rel. of the department. radiation diagnostics)

**Number of credits** - 1 credit

**Final control-testing**

Obsession: The elective course offers an analysis of the algorithms of radiation examinations of organs and systems for the most common pathological conditions in the practice of pediatricians. Prenatal

screening, being an integral part of radiology diagnostics and a special interest of clinicians, is included in the elective. A separate section deals with emergency conditions, radiation research algorithms, and radiation semiotics.

**10. Topic: Features of pharmacokinetics and pharmacodynamics of drugs in children** (resp. department. basic and clinical pharmacology)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of the CPV is to teach students the specifics of the use and impact of medicines in children.

**11. Topic: Operative surgery for congenital gastrointestinal obstruction in children.** (rel. department of hospital surgery with a course of operative surgery)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of CPV is to master the methods and techniques of surgical interventions for congenital gastrointestinal obstruction in children: intestinal resection, formation of an inter-intestinal anastomosis, intestinal suture.

**12. Topic: Fundamentals of specific and surgical infections.** (resp. Department. propaedsurgery)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of the course is to teach students the theoretical basics and practical skills in the main specializations. surgical infections in children.

**13.**

**Topic: Fundamentals of spiritual and moral culture for medical professionals (resp. Department of Philosophy and General Sciences)**

**Number of credits** – 1 credit

**Final control-testing**

Content: The purpose of the CPV is to reveal morality as a social consciousness and regulator of society's relations, to reveal the categories of culture and their historical character. Consider the concepts of freedom and responsibility, conscience and duty, honor and dignity.

**14. Topic: Ethics. Man is the bearer of morality. (resp. Department of Philosophy and General Science)**

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of the course is to give an idea of ethics, spiritual and moral culture, develop skills in applying ethical standards and promote the development of creative thinking, psychological flexibility and the formation of a modern highly qualified specialist.

**4th year. Each student is required to *complete 10 credits* (ECTS) during the year.)**

**1.Topic: Valeology (resp. Department of General Hygiene)**

**Number of credits - 1 credit**

**Final control-** testing

Content: The goal of CPV is to learn the basics of a healthy lifestyle and how to model and achieve these basics.

**2. Topic: Fundamentals of dermatocosmetology. (resp. Department of Dermatovenerology)**

**Number of credits - 1 credit**

**Final control-**testing

Content: Elective course opens the world of medical dermatocosmetology for the student. The elective course program includes the following topics:

skin and body aging, correction and prevention of various morphofunctional skin defects, prevention of premature aging of the body, early detection of diseases, basic laser technologies used in dermatology, cosmetic care for various types of skin

**3. Topic: Sports children's cardiology. (Department of Hospital pediatrics with neonatology course)**

**Number of credits - 1 credit**

**Final control-** testing

Content: Currently, a large number of children are involved in sports, so the problem of selecting children for sports is becoming relevant for pediatricians. It is also important to determine the timing of sports activities after a previous illness. Sports activities are characterized by a high physical and emotional load, which implies high functional loads on organs and systems.

**4. Topic: Congenital anomalies of the visual organ (rel. department of Ophthalmology)**

**Number of credits – 1credit**

**Final control-**testing

Content: When conducting classes, much attention is paid to the development of practical skills in ophthalmology by students, which are necessary in the future work of pediatricians.

**5. Topic: Pathophysiology of vitamin metabolism (resp. pat. physiology)**

**Number of credits - 1 credit**

**Final control-**testing

Content: To introduce students to the concept: factors leading to hypo and hypervitaminosis, mechanisms of development, manifestations and vitamin deficiency.

**6. Topic: Fundamentals of liver transplantation.** (resp. Department of faculty surgery)

**Number of credits** – 1 credit

**Final control-testing**

Content: The main goal of this liver transplant course is to increase students' knowledge of the most important areas 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.

**7. Topic: Rendering services psychological support help pages to the victims in case of emergency situations.** (resp. Department of Medical Psychology, Psychiatry and Narcology)

**Number of credits** - 1 credit

**Final control-testing**

Content: This course covers a system of short-term loans. Measures aimed at regulating the actual psychological, psychophysiological state and negative emotional experiences of children and adults affected by a crisis or emergency event using professional methods that meet the requirements of the situation.

**8. Topic: Modern approaches to the diagnosis and treatment of ENT diseases.**  
**Department of Otorhinolaryngology)**

**Number of credits** - 1 credit

**Final control-testing**

Contents: Elective course for students involves the study of theoretical and practical skills to diagnose and provide timely assistance in case of such conditions as: trauma, foreign body, ENT organs, nasal bleeding, stenosis of the larynx of various origins, chemical burns of the pharynx and esophagus, etc., highlighting characteristic symptoms of these diseases and determining the level of topical defeat.

**9. Topic: Specific issues of medical genetics.**( Department of Neurology and Clinical Genetics)

**Number of credits** - 1 credit

**Final control-testing**

Content: The purpose of CPV is to develop clinical and genetic methods for the diagnosis of hereditary pathology, to identify individuals with an increased risk of developing hereditary diseases.

**10. Topic: Fundamentals of laparoscopy** (senior Department of Faculty Surgery)

**Number of credits** – 1 credit

**Final control-testing**

Content: The course provides for the development of new theoretical knowledge by the student. knowledge and practical skills and covers types of specialized care on the basics of laparoscopy.

Practical engagements include:

- tissue suturing under the control of the endovideocamera;
- intracorporeal tying of nodes;
- extracorporeal tying of nodes;

- performing laparoscopic (bovine macropreparation) visual diagnostics and biopsy;
- performing laparoscopic (macropreparation of cattle) appendectomy and cholecystectomies

**11. Topic: Pathophysiology of drug addiction and substance abuse** (otv. kaf. pat. physiology)

**Number of credits** - 1 credit

**Final control-** testing

Content: Drug addiction-occupies one of the most important places among modern " diseases of civilization» This course will cover the etiology and pathophysiology of drug addiction and substance abuse; general mechanisms of action of narcotic drugs and psychoactive substances on the nervous system; stages of drug addiction and substance abuse, as well as the principles of their prevention and therapy.

**12. Topic: Modern methods of diagnosis, treatment and prevention of metabolic syndrome** (resp. Department of faculty therapy)

**Number of credits** - 1 credit

**Final control-**testing

Contents: The concept of the metabolic syndrome, the compensators of this syndrome: arterial hypertension, impaired glucose tolerance, obesity, hyperglycemia. Etiology, pathogenesis, and clinical manifestations of this syndrome

**5-th year. Each student is required to *complete 4 credits* (ECTS) during the year.**

**1.Topic: Problems of diagnosis of acute infectious diseases in children at the present stage. (rel. department of children's inf. diseases)**

**Number of credits** – 1 credit

**Final control-**credit.

Content: Children's infectious diseases are still an urgent problem in all countries of the world. Infectious diseases pose a threat to human development, as they account for a third of the total annual number of deaths in the world, and 80 % of diseases of children under the age of 5 are caused by various infectious pathologies.

**2.Topic: Actual problems of pediatric and adolescent gynecology.** (resp. Department Obstetrics and Gynecology)

**Number of credits** - 1 credit

**Final control-**credit.

Content: The purpose of the course is to improve theoretical and practical knowledge students on issues of child and adolescent gynecology

**3. Topic: Neurogenic bladder dysfunction in children. (rel. department of Pediatric surgery)**



**Number of credits – 1 credit**

**Final control-credit.**

Content: Given the high relevance of the problem of neurogenic bladder in pediatrics and pediatric urology due to the high prevalence of the disease in childhood and the risk of developing secondary changes in the urinary organs, this topic will be informative for students.

**4. Topic: Alpine medicine.** (resp. Department of Hospital therapy, Occupational pathology with a course of Hematology)

**Number of credits – 1 credit**

**Final control-credit.**

Content: The purpose of CPV is to study the mountain climate, specific mountain diseases and the course of individual diseases of the lungs and cardiovascular system in high-altitude conditions

**5. Subject: TORCH-infection. Diagnosis and treatment** (resp. Department of infectious diseases)

**Number of credits - 1 credit**

**Final control-credit.**

Content: The course is dedicated to topical issues of clinical and laboratory medicine. diagnostics of intrauterine infections.

**6.Topic: Selected questions of kidney pathology in newborns** (resp. Department of Hospital Pediatrics with Neonatology course)

**Number of credits - 1 credit**

**Final control-credit.**

Content: The purpose of CPV is to study the prevalence, causes, clinical and laboratory signs of kidney and genitourinary tract diseases in newborns

**6-th year. Each student is required to *complete 11 credits* (ECTS) during the year.**

**1.Topic: Emergency care for surgical pathologies in children.**

(resp. Department of Pediatric surgery)

**Number of credits – 1 credit**

**Final control-credit.**

Content: Students will consider the following syndromes and emergency situations: surgical diseases in children:

1. Traumatic shock in children.
2. External and internal bleeding (gastrointestinal, pulmonary, intracavitary);
3. Acute lesions of the abdominal organs: acute inflammatory diseases internal organs, perforations and ruptures of organs, acute intestinal obstruction, pinched hernias, (external and internal), intestinal necrosis in mesenteric vascular thrombosis.

**2. Topic: Marketing in healthcare. (resp. Department. OZZ).**

**Number of credits** - 1 credit

**Final control**-credit.

Content: Marketing in healthcare is a social and managerial process aimed at meeting the needs and demands of the population for medical care, through the creation, supply and exchange of valuable medical and pharmaceutical services and goods on the market.

**3. Topic: HIV and the child. (resp. Department of Children's infectious diseases)**

**Number of credits** - 1 credit

**Final control**-credit.

Content: This course of students' choice includes questions about HIV infection and children's health, when to test your child for HIV infection, how to discuss HIV issues with your child, and many other useful information.

**4. Topic: Social gerontology. (rel. of the department. OZZ)**

**Number of credits** – 1 credit

**Final control**-credit.

Content: This discipline covers issues closely related to the lifestyle of the elderly, health promotion that promotes longevity, organization of medical care, ethical and legal issues related to the protection and guarantee of the rights of the elderly and old people.

**5. Topic: Features of forensic medical examination of children's injuries.**

(resp. Department of Forensic Medicine and Law)

**Number of credits** - 1 kr

**Final control**-credit.

Content: Purpose: to teach students theoretical and practical basics forensic medical examination of child injuries.

**6. Topic: Dietetics. (rel. of the Department of hygiene disciplines)**

**Number of credits** - 1 credit

**Final control**-testing

Content: The purpose of the elective course is to teach students the basics of dietetics, to build a diet tailored to the physiological needs of nutrients and energy. This course will teach students to evaluate and make daily diets of patients, taking into account the chemical composition, energy value and features of pathogenesis, clinical course, stage of the disease, level and nature of metabolic disorders

**7. Topic: Differential diagnosis of juvenile arthritis. (rel. of the department. hospital pediatrics with neonatology course)**

**Number of credits** - credit

**Final control**-testing

Content: Chronic juvenile arthritis leads to a delay in physical and sexual development, to psychosocial trauma. Timely diagnosis and early adequate therapy will help to avoid or reduce these adverse outcomes of rheumatic diseases.

**8.Topic: Therapeutic classical massage.** (resp. Department of Clinical Rehabilitation and Physiotherapy)

**Number of credits - 1 credit**

**Final control-testing**

Content: The program for students of the Medical Faculty is intended for the initial study of massage. It describes all types and techniques of massage, hygienic basics of massage, the mechanism of therapeutic effect of massage on the body, recommendations for massage of various parts of the body are given.

**9. Topic: Health economics.** (rel. of the department. OZZ)

**Number of credits - 1 credit**

**Final control-testing**

Content: A graduate of a medical university should have an economic mindset, he should be able to consider his professional medical activity taking into account the economic significance of the medical and recreational activities carried out by him.

**10.Topic: Emergency Pediatric Nephrology** (Department of Faculty Pediatrics)

**Number of credits – 1credit**

**Final control-testing**

Content: Purpose: to teach students the theoretical foundations, modern methods of treatment, methods of emergency care for diseases of the urinary system

**11.Topic: Pulmonary and cardiac resuscitation (Department of Faculty Pediatrics).**

**Number of credits – 1credit**

**Final control-testing**

Content: Purpose: to teach students the methods of pulmonary and cardiac resuscitation according to PALS.

**12. Topic: Tuberculosis in children and adolescents associated with other diseases.** (chief of Phthisiology Department)

**Number of credits – 1credit**

**Final control- testing**

Content: The presented training cycle was compiled by the staff of the Department of Phthisiology, in order to form a deep knowledge of future pediatricians on the management of tuberculosis patients, primarily for work in outpatient settings among risk groups with various diseases. Also for training a specialist who knows how to conduct a competent differential analysis.- diagnostic search for tuberculosis in children and adolescents.

**13. Topic: Emergency care for burns** (resp. Department of General Practice Surgery with a course of Kombustiology)

**Number of credits** - 1 credit

**Final control-** testing

Content: Purpose: to teach students the theoretical foundations of thermal lesions and modern methods of treating burns in a hospital setting.

**14. Topic: Fundamentals of infection control in a healthcare organization** (resp. Department Commonly and Clinical Epidemiology)

**Number of credits** - 1 credit

**Final control-**testing

Content: Infectious control—the system organizational, preventive and anti-epidemic measures aimed at preventing the occurrence and spread of infections associated with the provision of medical care.

**15. Topic: Traditional medicine** ( resp. Department of Rehabilitation and Physical Therapy services)

**Number of credits** - 1 credit

**Final control-** testing

Content: The course provides an understanding of traditional medicine methods (massage, manual therapy, acupuncture, herbal medicine, homeopathy, traditional gymnastics, gerudotherapy, apitherapy, stone therapy, aromatherapy, sound therapy)

**16. Topic: Tuberculosis in children and adolescents associated with other diseases** (resp. Department of Phthysiology)

**Number of credits** - 1 credit

**Final control-**testing

Content: The presented training cycle was compiled by the staff of the Department of Phthysiology, in order to form a deep knowledge of future pediatricians on the management of tuberculosis patients, primarily for work in outpatient settings among risk groups with various diseases. Also for training a specialist who knows how to conduct a competent differential analysis.- diagnostic search for tuberculosis in children and adolescents.