**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 1 course

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

List and annotations of elective courses at the choice of students

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| **№** | **Name CPV** | **Credit** | **Annotations** |
| 1 | Fundamentals of Spiritual and Moral Culture in Medicine (Department of Philosophy and Social Sciences) | 1 | In modern conditions of our life, the role of morality and ethics, their creative potential should increase significantly. Since, unlike all other theoretical forms of knowledge, culture serves as a means of expressing the essence of consciousness and self-awareness of the era. Of course, a change in the character of a social epoch, its historical stage, is a change in the very content of the moral worldview. That is why morality is a specific form of analysis of social processes, their direction. So, the central point of moral problems, in general, is a person and his relationship to the world, society and to himself. |
| 2 | A culture of speech  (Department of Kyrgyz language) | 1 | Aimed at the formation of a culture of speech in teaching the Kyrgyz language, logical speech, enrichment of vocabulary, grammatical literacy, teaching the correct writing of documents, deepening the knowledge gained in the specialty |
| 3 | Tropical Parasitology (Department of Medical Biology, Genetics and Parasitology) | 1 | The purpose of the course is to expand students' knowledge of morphology, the characteristics of development cycles, the spread of parasites of a tropical climate, their pathogenic action, and measures to protect human health from parasites. Large migration of the population to different parts of the world, the arrival of foreign students from various countries, the presence of transit hosts of parasites and vectors suggest an expansion of the range of parasites and the need for additional knowledge of tropical parasitology. |

**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 2nd course

Each student is required to collect 9 credits (ECTS) during the year

List and annotations of elective courses at the choice of students

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| **№** | **CPV Name** | **Credit** | **Annotations** |
| 1 | Medical Geography (Department of Healthcare Department) | 1 | Medical geography is a scientific discipline that studies the impact of natural, economic and social conditions of various territories on the health of people inhabiting them. The main goal is to assist society in improving, including health improvement, the living environment of the population in order to achieve the highest level of its health. |
| 2 | Information and communication technologies in medicine (department of physics, mathematics and computer science and CT) | 1 | Formation of students' general ideas about the possibilities of using information and communication technologies that provide ample opportunities for processing medical information, mastering the techniques of working with modern standard software packages. |
| 3 | Features of indicators and mechanisms of regulation of functional systems of the child's body (Department of Fundamental and Clinical Physiology) | 1 | The content of the elective course provides for familiarization of students with the age-related periodization of human development and the study of age-related characteristics of the blood, cardiovascular, respiratory, digestive, urinary and nervous systems. |
| 4 | The role of biogenic elements in the human body (Department of Biochemistry with a course in general and bioorganic chemistry) | 1 | Formation in students of a system of natural science knowledge about the chemical and biological properties of biogenic elements, the presence and transformation of which constitute the molecular basis of the body's life. |
| 5 | Free radicals and antioxidants (Department of Biochemistry with a course in General and Bioorganic Chemistry) | 1 | This elective course will allow the student to understand the essence of free radical oxidation processes in health and disease and to open the "door" to the world of antioxidants, which is important for the activities of the future pediatrician. |
| 6 | Fundamentals of Nursing (Department of Nursing) | 1 | The purpose of the course is to familiarize students with the methods and principles of the correct implementation of nursing care and assessment of the condition of patients in hospitals, the skills of providing emergency first-aid medical care to patients. |
| 7 | Nanotechnology in Pediatrics (Department of Physics, Mathematics, Informatics and CT) | 1 | The main attention of the trainees is paid to new and latest 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 inferior. The nanoscale technology (1nm = 0.000000001m) is the molecular interactions of biostructures, correction on a thin structure, “at the root” of biosystems and the child's body, which allows to detect pathological processes at the very beginning. |
| 8 | Greek-Latin medical  terminology  (Department of Foreign and Latin Languages) | 1 | This course aims to master modern medical terminology, which allows to prepare terminologically competent future specialists for the conscious use of medical terms of Greek-Latin origin in practical health care, as well as to improve their cultural and educational level, to broaden their horizons. |
| 9 | Preparation of documents  (Department of Kyrgyz language) | 1 | These types of documents will be considered in this work program, since in our daily life, in institutions and schools, organizational and organizational and administrative documents are mainly actively used. |
| 10 | Age features of the membranes of the spinal cord and brain (department of normal and topographic anatomy) | 1 | The membranes of the brain and spinal cord are anatomical apparatus of exceptional importance and complexity. This is due to the fact that the child has a growing body. The brain and spinal cord are most intensely affected by age-related changes from birth to adolescence. Considering the above, it becomes obvious that it is extremely important to study the age-related features of the structure of the spinal cord membrane, the brain for students of the pediatric faculty, and this requires a detailed study of this problem. |
| 11 | Ethics (Department of Philosophy and Social Sciences) | 1 | The purpose of the course: to give an idea of ethics, to develop skills in the application of ethical norms and to promote the development of creative thinking, psychological flexibility and the formation of a modern highly qualified specialist. |

**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 3 course

Each student is required to gain 13 credits (ECTS) during the year

List and annotations of elective courses at the choice of students

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| № | **CPV Name** | **Credit** | **Annotations** |
| 1 | Diabetes mellitus type 1 in adults (Department of Internal Medicine Propedeutics) | 1 | The purpose of the elective course: to develop students' competence in identifying the symptoms of type 1 diabetes mellitus in adults and the defeat of the main target organs, taking into account fundamental knowledge. The main emphasis is placed on the modern assessment of glycemic levels, as well as practical skills for determining blood sugar by the express method, the glycemic profile, the value of fasting blood sugar, after meals, in the test for glucose tolerance, signs of acute hypo- and hyperglycemic states. |
| 2 | Features of caring for preschool children for their development (department of propedeutics of childhood diseases) | 1 | Purpose of the lesson: to teach students the basic elements of education for preschool children. Students must master the methods used to develop memory, speech, thinking, attention. Mastering practical skills in preschool institutions - to apply the methods of education in children, in the form of games, crosswords, maps, drawings and tests. |
| 3 | Clinical microbiological diagnosis of infections associated with the provision of medical care (HAI) (Department of Microbiology, Virology and Immunology) | 1 | The program is aimed at studying the types of microbes, transmission routes, factors contributing to the spread of nosocomial infections (nosocomial infections). The microbiological significance of microorganisms in the objects of the hospital environment (in water, air, food) in the development of nosocomial infections.  As a result of the training, students will master the rules for the collection, storage and transportation of clinical material with nosocomial infections of various localization. |
| 4 | Pathological anatomy of diseases of the fetus and newborn (department of pathological anatomy) | 1 | The purpose of the elective course is to study the structural foundations of these diseases, their etiology, pathogenesis and morphogenesis for the use of the knowledge gained in training at clinical departments for training a pediatrician. |
| 5 | Basic pharmacology of hepatoprotectors and neuroprotectors (department of basic and clinical pharmacology) | 1 | The purpose of the elective course is to study the structural foundations of these diseases, their etiology, pathogenesis and morphogenesis for the use of the knowledge gained in training at clinical departments for training a pediatrician. |
| 6 | Biochemical changes in violation of the function of the gastrointestinal tract and liver in adults and children  (Department of Biochemistry with a course of general and bioorganic chemistry) | 1 | This elective course will allow the student to expand and systematize knowledge about the pathobiochemistry of the stomach, pancreas, intestines, liver and methods of their research. Students will study the features of the digestion process in pathological conditions of the gastrointestinal tract, biochemical markers of diseases of the liver, pancreas, stomach and intestines. And they will also master the principles of carrying out methods of biochemical analyzes for diseases of the gastrointestinal tract and the main more sensitive biochemical tests of diseases of the gastrointestinal tract.  This elective course will help students of the pediatric faculty to assimilate the main characteristic manifestations of metabolic processes in childhood in order to prepare the pediatrician to understand the mechanisms of the onset and development of pediatric pathology, to correctly use the methods of biochemical diagnostics, as well as to choose pathogenetically grounded means of treatment. |
| 7 | Problems and prospects of organizing vaccination business (Department of General and Clinical Epidemiology) | 1 | Purpose of the course: to study the basics of organizing vaccinations and new directions in the development and production of immunobiological drugs. |
| 8 | Diagnostics and semiotics of post-traumatic dislocations in children under 3 years of age  (Department of Pediatric Surgery) | 1 | Purpose of the course: to familiarize students with the main symptoms and diagnosis of post-traumatic dislocations in children under 3 years of age. |
| 9 | Pathophysiology of Vitamin Metabolism (Department of Pathological Physiology) | 1 | The purpose of the course: to form the ability to solve professional medical problems on the basis of a pathophysiological analysis of data on the causes and conditions of occurrence, mechanisms of development and outcomes of typical forms of pathology of vitamin metabolism; learn to recognize and differentiate their main clinical forms. |
| 10 | Basics of Specific Surgical Infections  (Department of Propedeutic Surgery) | 1 | The aim of the course is to educate students in the theoretical foundations and practical skills on the main specific surgical infections in children. Specific surgical infections differ in the characteristics of the general and local reaction of the body, diagnosis and treatment. This course examines the issues of etiopathogenesis, clinical picture, diagnosis and preventive measures for acute and chronic specific infections. |
| 11 | Topical issues of radiation diagnostics in pediatrics  (Department of Radiation Diagnostics and Therapy) | 1 | The elective course offers an analysis of the algorithms for radiation studies of organs and systems in the most common pathological conditions in the practice of pediatricians. Prenatal screening, being an integral part of radiation diagnostics and a special interest of clinicians, is included in the elective. A separate block deals with emergency conditions, radiation research algorithms and radiation semiotics. |
| 12 | Psychohygiene (Department of General Hygiene) | 1 | The purpose of the course 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. |
| 13 | Slow viral infections and prion diseases (Department of Microbiology, Virology and Immunology) | 1 | Currently, a person is more and more susceptible to infections and pathogens of a different nature. Thanks to this cycle, students will gain knowledge about the causative agents of slow viral infections, characterized by the following signs:  • persistence in the body with an unusually long incubation period (months, years);  • viruses cause a kind of damage to organs and tissues, mainly the central nervous system;  • the multiplication of viruses in the body is accompanied by a slow steady progression of the disease;  • damage to the cells of the central nervous system leads to inevitable death.  We are talking about the causative agents of such diseases as "kuru" or "laughing death", panencephalitis (complication of measles infection), progressive rubella panencephalitis, progressive multifocal encephalopathy, etc.  Information on the characteristics of pathogens, methods of transmission of infections, diagnosis and prevention of this group of diseases will be presented.  Больше информации об этом исходном текстеЧтобы получить дополнительную информацию, введите исходный текст |
| 14 | Providing psychological assistance in pandemics (department of medical psychology, narcology and psychiatry) | 1 | During the course, students receive information about a system of short-term activities aimed at regulating the psychological, psychophysiological state and negative emotional experiences of a person or a group of people in a pandemic using psychological methods that meet the requirements of the situation.  The subject of study is the provision of first psychological aid to victims: adults and children. In pandemic situations, the main link of medical and psychological care is medical professionals who are the first to face the pandemic and its consequences. The relevance of the information provided on this course for future doctors is to master the knowledge and skills of providing psychological assistance to prevent serious mental health consequences of the population in a pandemic.  Больше информации об этом исходном текстеЧтобы получить дополнительную информацию, введите исходный текст  Отправить отзыв  Боковые панели |
| 15 | Pathophysiology of drug addiction and substance abuse  (Department of Pathological Physiology) | 1 | Drug addiction - occupies one of the most important places among the modern "diseases of civilization".  Within the framework of this course, the questions of the etiology and pathophysiology of drug addiction and substance abuse will be considered; general mechanisms of action of 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. |

**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 4 course

Each student is required to gain 13 credits (ECTS) during the year

List and annotations of elective courses at the choice of students

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| № | **CPV Name** | **Credit** | **Annotations** |
| 1 | Valeology  (Department of General Hygiene) | 1 | The aim of the CPV is to explore the foundations of a healthy lifestyle and how to model and achieve those foundations. |
| 2 | Fundamentals of dermatocosmetology  (Department of Dermatovenereology) | 1 | An elective course opens up the world of medical dermatocosmetology for the student. The elective course program included topics: aging of the skin and the body, correction and prevention of various morpho-functional skin imperfections, prevention of premature aging of the body, early detection of diseases, the main laser technologies used in dermatology, cosmetic care for various types of skin. |
| 3 | Congenital anomalies of the organ of vision  (Department of Ophthalmology) | 1 | The purpose of the course: to expand and deepen knowledge on congenital pathology of the organs of vision, the development of which will improve the professional competence of a pediatrician, systematize clinical thinking, improve the ability and willingness to carry out preventive measures to prevent complications of certain eye diseases. |
| 4 | 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 the level of knowledge of students in the most important sections of liver transplantation. Studying in this elective course will allow students to acquire broader and deeper knowledge, get acquainted with the latest technologies and methods of liver transplantation. |
| 5 | Modern methods of diagnostics, treatment and prevention of metabolic syndrome (department of faculty therapy) | 1 | The purpose of the course: the formation of students' competencies in the timely identification and management of patients with metabolic syndrome; carrying out complex treatment, depending on concomitant diseases and the presence of complications; conducting secondary prevention of the development of cardiovascular complications. |
| 6 | Providing psychological  assistance to victims in emergency situations (department of medical psychology, psychiatry and narcology) | 1 | Within the framework of this course, a system of short-term events is considered aimed at regulating the current 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. |
| 7 | Emergencies in otorhinolaryngology  (Department of Otorhinolaryngology) | 1 | An elective course for students provides for the study of theoretical as well as practical skills and abilities to diagnose and provide timely assistance in such conditions as: injuries, foreign bodies of ENT organs, nosebleeds, stenoses of the larynx of various origins, chemical burns of the pharynx and esophagus, etc. , highlighting the characteristic symptoms of these diseases and determining the level of topical lesions. |
| 8 | Particular questions of medical genetics (department of neurology with a course of medical genetics) | 1 | The purpose of the CPV is the development of clinical and genetic methods for diagnosing hereditary pathology, identifying individuals with an increased risk of developing hereditary diseases. |
| 9 | Fundamentals of Laparoscopic Technologies in Surgery (Department of Faculty Surgery) | 1 | The course provides for the development by the student of new theoretical knowledge and practical skills and covers the types of specialized assistance in the basics of laparoscopy.  Practical lessons include:  - stitching of tissues under the control of an endovideo camera;  - intracorporeal knot tying;  - extracorporeal knot tying;  - performing laparoscopic (bovine macropreparation) visual diagnostics and biopsy;  -performance of laparoscopic (bovine macropreparation) appendectomy and cholecystectomy. |
| 10 | Sports pediatric cardiology (department of hospital pediatrics) | 1 | Currently, a large number of children are involved in sports, therefore, the problem of selecting children for sports is becoming relevant for pediatricians. And it is also important to determine the timing of sports after illness. Sports are characterized by high physical and emotional stress, which implies high functional stress on organs and systems. |
| 11 | Hygiene of food, clothes, shoes and children's household items in children's and adolescent institutions (department of hygiene disciplines) | 1 | Social and hygienic factors, nutritional conditions, upbringing and education of children in educational institutions have a pronounced impact on the formation of the health of the younger generation. The sickness rate of children depends on the way of life. This indicates the importance of a hygienically adequate environment that surrounds the child and forms him as a person, physically and mentally healthy. Nutritional and livelihood conditions should be conducive to education and upbringing and promote the normal growth and development of children and adolescents.  Future pediatricians should learn to competently and comprehensively assess the interaction of the body and the environment, be able to identify environmental factors that have a positive or negative effect on the body, assess the degree of this impact and take specific preventive measures aimed at improving the external environment and strengthening the health of the child population ... |

**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 5 course

Each student is required to gain 13 credits (ECTS) during the year

List and annotations of elective courses at the choice of students

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| № | **CPV Name** | **Credit** | **Annotations** |
| 1 | TORCH infection. Diagnostics and Treatment (Department of Infectious Diseases) | 1 | The course is dedicated to topical issues of clinical and laboratory diagnostics of intrauterine infections. |
| 2 | Features of children's infectious diseases in adults (department of children's information diseases) | 1 | The purpose of the CPV: to teach students the early diagnosis of the so-called childhood infectious diseases in adults and to explain the tactics of managing these patients on an outpatient basis. It is generally accepted that diseases such as measles, rubella, scarlet fever, chickenpox, mumps infection are recorded mainly in children. They have acquired "childhood infections" in everyday life. However, these diseases are also seen in adults. Moreover, in recent years, they are increasingly observed in persons over 15 years of age. It should be noted that childhood infections in adults are often more severe than in children, have certain characteristics, sometimes other manifestations, complications. Late diagnosis entails late isolation, late detection of complications, the appointment of adequate therapy, and increases the number of people in contact. |
| 3 | Topical issues of pediatric gynecology (department AiG1) | 1 | The aim of the proposed elective course is to study the most common diseases of the reproductive system of children and adolescents. Ability to use the knowledge gained to conduct a differential diagnostic search in the most difficult situations encountered in the diagnosis of diseases in children and adolescents.  The material of the program includes common nosologies, such as: uterine bleeding during puberty, urogenital infections in children, acute abdomen in children and adolescents, algomenorrhea and others. The issues of physiological characteristics of the reproductive system of children, the microflora of the vulva and vagina in children and adolescents, the examination program for vulvovaginitis, endocrine disorders, the basics of the regulation of puberty, the role of the mother in the examination of children will be considered. |
| 4 | Alpine medicine (department of hospital therapy) | 1 | The purpose of the CPV is to study the mountain climate, specific mountain diseases and the course of certain diseases of the lungs and cardiovascular system in high altitude conditions. |
| 5 | Exercise therapy for spinal pathology in children (Department of Clinical Rabilitology and Physiotherapy) | 1 | The program "Exercise therapy for spinal pathology in children" for students of the pediatric faculty is designed to study the basics and preventive measures for posture defects and scoliosis. The program contains the tasks and complexes of exercise therapy used for posture defects and scoliosis of varying degrees. |
| 6 | Brain cysts in newborns, especially surgical treatment (Department of Pediatric Surgery) | 1 | The topic is most relevant, since early diagnosis and treatment of brain cysts prevent the development of serious neurological complications and contribute to the normal development of the child. The elective course provides for the study of the causes and mechanisms of the development of brain cysts in children, their clinical manifestations. It helps to develop the skills of setting and formulating a clinical diagnosis of a given nosology, to study the principles of treatment. |
| 7 | Fundamentals of Infection Control (Department of General and Clinical Epidemiology) | 1 | Infection control is a system of organizational, preventive and anti-epidemic measures aimed at preventing the occurrence and spread of infections associated with the provision of medical care. |
| 8 | Practical fundamentals of magnetic resonance imaging of the human body (Department of Radiation Diagnostics and Therapy) | 1 | Magnetic resonance imaging (MRI) has become a key imaging technique in clinical medicine and is highly effective in diagnosing a wide variety of diseases.  This elective is provided for a more in-depth study and practical orientation of the method, the formation of literacy about its application in various fields of clinical medicine. During the elective course, students study and generalize the general principles of magnetic resonance imaging of "changed" and "healthy" tissues of the human body, observe functional changes in some structures, multilevel tissue contrast of the investigated area. As part of the elective course, it is meant the analysis of tomograms and clinical cases in the sections of the musculoskeletal system, gynecology, uronephrology, neurology, angiology, pediatrics, endocrinology, focusing on mastering the MRI method and consolidating practical skills. It is obligatory to study the specifics of normal anatomy with MRI and pathological anatomy in different age categories. The CPV includes lectures and practical exercises with a demonstration of magnetic resonance imaging and the possibility of conducting research, as well as independent work of a student, according to the thematic plan. At the end of the course, a quiz is conducted to assess knowledge of the material covered and receive a credit. |
| 9 | Dietetics  (department of hygienic disciplines) | 1 | The aim of studying an elective course is to teach students the basics of dietetics, how to build food, taking into account the physiological needs for nutrients and energy. This course will teach students to evaluate and compose the daily rations of patients, taking into account the chemical composition, energy value and characteristics of pathogenesis, clinical course, stage of the disease, level and nature of metabolic disorders. |

**Student elective courses (CPC) for the academic year 2020-2021**

Specialty: "Pediatrics" 6 course

Each student is required to gain 2 credits (ECTS) during the year

List and annotations of elective courses at the choice of students

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| № | **CPV Name** | **Credit** | **Annotations** |
| 1 | HIV and Child (Department of Children's Infectious Diseases) | 1 | This student choice course includes HIV and child health, when to test a child for HIV, how to discuss HIV with your child, and much more useful information. |
| 2 | Healthcare Marketing (Department of Healthcare) | 1 | Healthcare marketing is a social and managerial process aimed at meeting the needs and requirements of the population for medical care through the creation, supply and exchange of valuable medical and pharmaceutical services and goods on the market. |
| 3 | Features of forensic medical examination of child injuries (department of forensic medicine and jurisprudence) | 1 | Purpose: teaching students the theoretical and practical foundations of forensic medical examination of child injuries. |
| 4 | Therapeutic classic massage for children (Department of Clinical Rehabilitation and Physiotherapy) | 1 | The program for students of the pediatric faculty is intended for the initial study of massage. It describes all types and techniques of massage, the hygienic basics of massage, the mechanism of the therapeutic effect of massage on the body, recommendations for massage of various parts of the body are given. |
| 5 | Fundamentals of Modern Medical Legislation (Department of Forensic Medicine and Jurisprudence) | 1 | This elective course is provided for medical students in order to acquire knowledge in the field of legal regulation of medical activity. The issues of legislative support for the protection of public health, the rights and obligations of medical organizations, medical and pharmaceutical workers, as well as citizens in the field of health care, the problems of social and legal protection of medical workers are considered. |
| 6 | Emergency care for burns in children (general surgery with a course of combustiology) | 1 | Annually, on average, 1,700 burned people turn to the Republican Burn Center for medical help. Of these, 55% are adults, the remaining 45% are children.  The specificity of the treatment of burns in children is determined by age-related characteristics (thin skin, anatomical immaturity of organs, insufficiently developed vascular anastomoses, physiological hydrolability of the child's body, incomplete formation of the nervous, humoral, CVS and respiratory systems), underdevelopment of adaptive capabilities, increased metabolism, increased tissue need in oxygen, rapid transition of compensatory states to decompression ones. This causes a more severe course of burn disease in children.  However, children, as a rule, do not have severe concomitant diseases and regeneration processes are better expressed. |
| 7 | Social Gerontology (Department of OZiZ) | 1 | This discipline covers issues closely related to the lifestyle of older people, health promotion that promotes longevity, the organization of medical care, ethical and legal issues related to the protection and guarantee of the rights of the elderly and old people. |
| 8 | Basic Pulmonary Cardiac Resuscitation in Pediatrics (PALS) (Department of Faculty Pediatrics) | 1 | The purpose of the course: the formation of knowledge, skills and practical skills in the provision of emergency care for cardiopulmonary insufficiency in children (PALS). |