**MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION**
**MINISTRY OF SCIENCE, HIGHER EDUCATION, AND INNOVATION OF THE KYRGYZ REPUBLIC**

Kyrgyz-Russian Slavic University named after the first President of the Russian Federation B.N. Yeltsin

**APPROVED**
(position)
(Full Name)
04.11.2026

# Pediatric Surgery

## Working program of the discipline (module)

Assigned to the Department: **Pediatrics and Pediatric Surgery**

Curriculum: 310501_26_1 ld in.plx

Specialty: 31.05.01. - RF, 560001 - KR General Medicine (for international students)

Qualification: **General Practitioner**

Form of study: **Full-time**

Total workload: **2 ZET**

Curriculum hours: 72

including:

Classroom classes: 48

Independent work: 23,7

Types of assessment per semester:

12 credits

**Distribution of course hours by semester:**

| Semester (<Course>.<Semester in the course>) | 12 (6.2) | | Total | |
|---|---|---|---|---|
| Weeks | 18 | | | |
| Type of activity | SP | WP | SP | WP |
| Lectures | 16 | 16 | 16 | 16 |
| Practical classes | 32 | 32 | 32 | 32 |
| Contact work during theoretical training | 0,3 | 0,3 | 0,3 | 0,3 |
| Including interactive forms | 4 | 4 | 4 | 4 |
| Total auditorium classes | 48 | 48 | 48 | 48 |
| Total contact work | 48,3 | 48,3 | 48,3 | 48,3 |
| Independent work (Self-study) | 23,7 | 23,7 | 23,7 | 23,7 |
| Total workload | 72 | 72 | 72 | 72 |

*The program was compiled by:*

*Instructor: Artur Aibekovich Moidunov*

*PhD in Medical Sciences, Associate Professor: Vladimir Nikolayevich Poroschay*

Reviewer(s):

*Doctor of Medical Sciences, Professor: Talantbek Oroskulovich Omurbekov*

Approved by the Head of the Educational Program:

Discipline Curriculum Standards & Legal Framework:
Pediatric Surgery

Developed in accordance with Federal State Educational Standard 3++ (FSES HE 3++):
Federal State Educational Standard of Higher Education – Specialist Degree in Specialty 31.05.01 General Medicine (Order of the Ministry of Education and Science of Russia dated August 12, 2020, No. 988).

Compiled based on the curriculum:

Specialty 31.05.01 - Russian Federation, 560001 - KR General Medicine (for international students)
Approved by the University Academic Council on June 26, 2026, Minutes No. 11.

Working program approved at the department meeting:

Minutes dated August 26, 2026, No. 1.
Program validity period: 2021–2027 academic year

Head of Department: Irina Gennadyevna Shayderova

# AMENDMENTS REGISTRATION SHEET
# to the working program of the discipline (module)

## Pediatric Surgery

_____ *Name of the discipline*

| No. | Basis for introducing amendments | Section / Paragraph | Content of the amendment |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |

| 1. GOALS OF MASTERING THE DISCIPLINE | |
|---|---|
| 1.1 | 1.1 The goals of mastering the discipline of pediatric surgery are to provide students with the necessary information on semiotics, clinical presentation, diagnosis, differential diagnosis, treatment strategy, and emergency care for surgical congenital anomalies, surgical and urological diseases, traumatic injuries, tumors, and critical conditions in children of various age groups. |
| 1.2 | 1.2 The objective of studying the discipline is to learn the basic principles of diagnosing congenital anomalies and surgical diseases in children requiring emergency (urgent) medical care, master medical tactics regarding these conditions, and provide psychological support to children and their parents. |
| 1.3 | 1.3 The learning objectives include teaching students to: |
| 1.4 | 1.4 - establish a preliminary diagnosis of surgical diseases in children in typical situations; |
| 1.5 | 1.5 - master the timing of surgical correction for congenital malformations; |
| 1.6 | 1.6 - resolve questions regarding the timing of referral to a surgeon; |
| 1.7 | 1.7 - provide emergency medical care; |
| 1.8 | 1.8 - carry out the necessary pathogenetic therapy aimed at preventing complications; |
| 1.9 | 1.9 - determine and ensure the necessary conditions for transporting children with surgical diseases and congenital malformations; |
| 1.10 | 1.10 - master methods of persuading parents of the need for surgical correction of malformations within specific timeframes; |
| 1.11 | 1.11 - understand the principles of follow-up care (dispensary observation) and rehabilitation of children discharged from a surgical hospital. |
| 1.12 | 1.12 The study of pediatric surgery is conducted according to the classical principle — from propedeutics of pediatric surgical diseases to the study of specific nosological entities. |

| 2. PLACE OF THE DISCIPLINE IN THE STRUCTURE OF THE ACADEMIC PROGRAM (EP) | |
|---|---|
| Educational Program Cycle | B1.O (Mandatory) |
| **2.1** | **Prerequisites and requirements for prior student preparation:** |
| 2.1.1 | Cycle (section) of the Educational Program: B1.O |
| 2.1.2 | 2.1 Requirements for the preliminary preparation of the student: |
| 2.1.3 | 2.1.1 A general practitioner must not only know the main symptoms and clinical manifestations of the most common surgical diseases, but also be able to conduct the necessary examination, establish a correct diagnosis, determine surgical tactics, and provide emergency medical care in critical conditions in children. |
| 2.1.4 | 2.1.2 The study of pediatric surgery is conducted in a classical sequence: from mastering basic surgical patient care skills in the 1st year and propedeutics of pediatric surgical diseases to the study of nosological entities and surgical syndromes in children in the 6th year. |
| 2.1.5 | 2.1.3 The training course "General Nursing Care for Surgical Patients" in a surgical hospital is represented as a separate program. |
| 2.1.6 | 2.1.4 This program is designed so that in the 11th semester, students study the main branches of pediatric surgery: emergency abdominal and purulent surgery, urology, elective surgery, traumatology and orthopedics, thoracic surgery, neonatal surgery, and resuscitation and intensive care for surgical diseases in children. |
| 2.1.7 | 2.1.5 During classes, students study the semiotics and diagnostics of surgical diseases and congenital malformations in children, including the analysis of etiology, pathogenesis, clinical presentation, diagnosis, prevention, timing, and methods of treatment. In practical sessions, students acquire practical skills in examining children with surgical pathology, with significant emphasis placed on developing the ability to establish rapport with a sick child and their parents, as well as conducting an initial physical examination of the child considering age-specific characteristics and severity of the condition. |
| 2.1.8 | 2.1.6 Great attention is paid to differential diagnosis, especially with borderline conditions, and indications regarding the timing of surgical intervention. |
| 2.1.9 | 2.1.7 Surgical treatment of patients is analyzed strictly from the perspective of age-based indications and the goals of the operation, without studying technical operative details. |
| 2.1.10 | 2.1.8 The foundation of practical skills is the provision of emergency medical care to children with severe and complicated courses of surgical pathology at different stages of medical care (Feldsher-Obstetric Station [FAP], local hospital, outpatient clinic [Family Medicine Center / FMC, Family Group Practice / FGP], somatic inpatient department, Central District Hospital / CDH, Emergency Medical Service station) and the organization of proper transportation of patients, especially during the neonatal period. |
| 2.1.11 | 2.1.9 Considerable attention in the educational process is devoted to issues of medical deontology, addressing the moral, ethical, and professional requirements expected of physicians in their clinical practice. |
| 2.1.12 | 2.1.10 In addition, across all training modules, students study the aspects of follow-up care (dispensary observation) and rehabilitation of children discharged from a surgical hospital. |

| | |
|---|---|
| 2.1.13 | 2.1.11 The material presented in the pediatric surgery curriculum relies on knowledge previously acquired by students in the departments of pediatrics, general surgery, humanities, medical psychology, and psychotherapy. |
| 2.1.14 | 2.1.12 Subsequently, this knowledge is deepened and expanded during the study of other clinical disciplines involved in the management of a sick child: "Infectious Diseases with Epidemiology", "Military Epidemiology", "General Surgery", "Oncology", "Pediatrics", "Obstetrics and Gynecology", where the issues of medical care delivery are considered in conjunction with specific aspects of etiopathogenesis, diagnostics, and patient rehabilitation. |
| 2.1.15 | 2.1.13 Basic prerequisite knowledge required for studying the discipline: |
| 2.1.16 | 2.1.14 Anatomy |
| 2.1.17 | 2.1.15 Physiology |
| 2.1.18 | 2.1.16 Histology with Embryology |
| 2.1.19 | 2.1.17 Microbiology |
| 2.1.20 | 2.1.18 Clinical Pharmacology |
| 2.1.21 | 2.1.19 Pathological Anatomy |
| 2.1.22 | 2.1.20 Pathological Physiology |
| 2.1.23 | 2.1.21 Operative Surgery |
| 2.1.24 | 2.1.22 General and Hospital Surgery |
| 2.1.25 | 2.1.23 Radiology |
| 2.1.26 | 2.1.24 Propedeutics of Internal Medicine |
| 2.1.27 | 2.1.25 Propedeutics of Pediatrics |
| 2.1.28 | 2.1.26 Pediatrics |
| 2.1.29 | 2.1.27 Urology |
| 2.1.30 | 2.1.28 Traumatology |
| 2.1.31 | 2.1.29 Obstetrics and Gynecology |
| 2.1.32 | 2.1.30 Surgical Practice (Physician Assistant) |
| 2.1.33 | 2.1.31 Emergency Medical Procedures Practice (Fundamentals of Emergency Care) |
| 2.1.34 | 2.1.32 Medical Rehabilitation |
| 2.1.35 | 2.1.33 Normal Physiology |
| 2.1.36 | 2.1.34 General Practice Internship (Outpatient Clinic Physician Assistant) |
| 2.1.37 | 2.1.35 Anatomy |
| 2.1.38 | 2.1.36 General Surgery |
| 2.1.39 | B1.O.20. Anatomy |
| 2.1.40 | B1.O.22. Histology, Embryology, Cytology |
| 2.1.41 | B1.O.24. Microbiology, Virology |
| 2.1.42 | B1.O.36. Clinical Pharmacology |
| 2.1.43 | B1.O.23. Normal Physiology |
| 2.1.44 | B1.O.27. Pathological Anatomy |
| 2.1.45 | B1.O.28. Pathophysiology, Clinical Pathophysiology |
| 2.1.46 | B1.O.21. Topographic Anatomy and Operative Surgery |
| 2.1.47 | B1.O.50. Traumatology, Orthopedics |
| 2.1.48 | B1.O.32. Propedeutics of Internal Medicine |
| 2.1.49 | B1.O.46. Hospital Surgery |
| 2.1.50 | B1.O.56. Obstetrics |
| 2.1.51 | B1.O.44. General Surgery |
| 2.1.52 | B1.O.51. Urology |
| 2.1.53 | B1.O.58. Pediatrics |
| 2.1.54 | B2.V.02(P). Surgical Practice (Physician Assistant) |
| 2.1.55 | B1.O.57. Gynecology |
| 2.1.56 | B1.O.19. Anatomy |
| 2.1.57 | B1.O.20. Topographic Anatomy and Operative Surgery |
| 2.1.58 | B1.O.49. Traumatology and Orthopedics |
| 2.1.59 | B1.O.23. Microbiology and Virology |
| 2.1.60 | B1.O.35. Clinical Pharmacology |
| 2.1.61 | B1.O.26. Pathological Anatomy |
| 2.1.62 | B1.O.21. Histology, Embryology, Cytology |

| | |
|---|---|
| 2.1.63 | B1.O.60. Clinical Pathological Anatomy |
| 2.1.64 | B1.O.27. Pathophysiology, Clinical Pathophysiology |
| 2.1.65 | B1.O.22. Normal Physiology |
| 2.1.66 | B1.O.56. Gynecology |
| 2.1.67 | B1.O.57. Pediatrics |
| 2.1.68 | B1.O.50. Urology |
| 2.1.69 | B1.O.43. General Surgery |
| 2.1.70 | B1.O.44. Departmental Surgery |
| 2.1.71 | B1.O.46. Anesthesiology, Resuscitation, and Intensive Care |
| 2.1.72 | B2.V.02(P). Surgical Internship (Physician Assistant) |
| **2.2** | **Disciplines and practical trainings for which mastering this discipline (module) is a prerequisite:** |
| 2.2.1 | 2.2.1 Diagnostic and treatment standards. |
| 2.2.2 | 2.2.2 Fundamentals of critical thinking: Evidence-based medicine. |
| 2.2.3 | 2.2.3 Preparation for and passing of the state examination. |
| 2.2.4 | 2.2.4 Research work |
| 2.2.5 | 2.2.5 Practice in emergency medical procedures (Anesthesiologist-Intensivist Assistant) |
| 2.2.6 | 2.2.6 Preparation for and passing of the state examination |
| 2.2.7 | 2.2.7 Anesthesiology, Intensive Care, and Critical Care Medicine |
| 2.2.8 | B3.O.02. Preparation for and passing of the state examination |
| 2.2.9 | B3.O.01. Preparation for and Passing the State Examination |

| **3. STUDENT COMPETENCES FORMED AS A RESULT OF MASTERING THE DISCIPLINE (MODULE)** | |
|---|---|
| **GPC-7: Able to prescribe treatment and monitor its efficacy and safety** | |
| **Know:** | |
| Level 1 | etiology, pathogenesis, and clinical presentation of major diseases across various nosological entities, as well as methods for patient management and treatment in outpatient and day-hospital settings; |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | compare various types and methods of treatment for patients with different nosological entities, and develop a disease treatment plan;<br>manage and treat patients in outpatient and day-hospital settings;<br>exercise control over |
| Level 2 | |
| Level 3 | |
| **Own:** | |
| Level 1 | skills in analyzing various types of treatment for patients with different nosological entities;<br>skills in managing and treating patients with various diseases in outpatient and day-hospital settings. |
| Level 2 | |
| Level 3 | |

| **PC-4: Ready to collect and analyze patient complaints, medical history, physical examination findings, as well as laboratory, instrumental, pathomorphological, and other diagnostic data to recognize conditions or establish the presence or absence of a disease** | |
|---|---|
| **Know:** | |
| Level 1 | the main types and methods of treatment for pediatric patients and adolescents with various nosological entities, as well as their specific characteristics. |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | select optimal treatment methods for children and adolescents depending on the nosological form of the disease. |
| Level 2 | |

| | |
|---|---|
| Level 3 | |
| **Own:** | |
| Level 1 | techniques for searching and comparing different methods of treatment for pediatric patients and adolescents with various nosological entities. |
| Level 2 | |
| Level 3 | |

| **PC-5: Able to determine primary pathological conditions, symptoms, disease syndromes, and nosological entities in patients in accordance with the International Statistical Classification of Diseases and Related Health Problems, 10th Revision.** | |
|---|---|
| **Know:** | |
| Level 1 | etiopathogenesis, clinical presentation, and diagnostics of major diseases, methods and tools for collecting and analyzing medical complaints and history of a child and adolescent, as well as indications and contraindications for the management and treatment of children and adolescents in outpatient and day-hospital settings. |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | collect and analyze patient complaints and medical history data; order laboratory, instrumental, and other diagnostic examinations to recognize a condition or determine the presence or absence of a disease; and establish indications and contraindications for management and treatment in outpatient and day-hospital settings. |
| Level 2 | |
| Level 3 | |
| **Own:** | |
| Level 1 | etiopathogenesis, clinical presentation, and diagnostics of major diseases, methods and tools for collecting and analyzing medical complaints and history of a child and adolescent, as well as indications and contraindications for the management and treatment of children and adolescents in outpatient and day-hospital settings. |
| Level 2 | |
| Level 3 | |

| **PC-7: Able to determine management strategies for patients with various nosological entities** | |
|---|---|
| **Know:** | |
| Level 1 | rules for conducting system-by-system physical examinations in children, and principles of primary resuscitation for pediatric patients of various ages |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | identify and isolate key symptoms of organ and system involvement in children during life-threatening conditions |
| Level 2 | |
| Level 3 | |
| **Own:** | |
| Level 1 | practical skills in identifying major organ and system involvement syndromes in pediatric emergency conditions |
| Level 2 | |
| Level 3 | |

| **PC-11: Ready to participate in providing emergency medical care for conditions requiring urgent medical intervention.** | |
|---|---|
| **Know:** | |
| Level 1 | algorithms for emergency medical care; key physician-level diagnostic and therapeutic interventions for providing first medical aid in emergency conditions requiring immediate medical intervention. |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | select an individualized type of care for patient treatment depending on the clinical situation: first aid, emergency medical care, or hospitalization. |
| Level 2 | |
| Level 3 | |
| **Own:** | |

| | |
|---|---|
| Level 1 | proficiency in a complex of resuscitation measures for acute respiratory and circulatory failure, as well as clinical death; knowledge of modern resuscitation and intensive care methods when providing emergency care to patients and victims in critical conditions of various etiologies. |
| Level 2 | |
| Level 3 | |

| **PC-12: Ready to participate in providing medical assistance in emergency situations, including participation in medical evacuation.** | |
|---|---|
| **Know:** | |
| Level 1 | Fundamentals of developing a safety culture, environmental awareness, and risk-oriented thinking, in which safety and environmental preservation issues are considered top priorities of human life activity. |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | Understand the theory of the epidemic process, the types of epidemiological studies, and their purposes;<br><br>Implement anti-epidemic measures and public health protection in outbreaks of particularly dangerous infections, under deteriorating radiation conditions, and during natural disasters;<br><br>Identify the harmful effects of environmental factors on the human body, key features of the clinical course and potential complications of the most common diseases, diagnostic methods, as well as modern clinical, laboratory, and instrumental examination methods for patients;<br><br>Analyze the organizational specifics of delivering medical care during mass gatherings and sporting events, as well as in emergency situations and disasters during peacetime and wartime. |
| Level 2 | |
| Level 3 | |
| **Own:** | |
| Level 1 | Methods of organizing a comprehensive set of measures aimed at preserving and promoting health and eliminating harmful factors;<br><br>Skills in analyzing and assessing the quality of medical care, the health status of the population, and the impact of environmental and occupational factors on it;<br><br>Skills in preventing the occurrence and spread of diseases, ensuring their early diagnosis, and identifying their root causes;<br><br>Skills in executing preventive, hygienic, and anti-epidemic measures;<br><br>Ability to select an individualized mode of care for patient management appropriate to the clinical situation: first aid, emergency medical care, or hospitalization. |
| Level 2 | |
| Level 3 | |

| **PC-14: Able to maintain medical documentation.** | |
|---|---|
| **Know:** | |
| Level 1 | The list and characteristics of medical record-keeping and reporting documentation in healthcare organizations;<br><br>Regulatory documentation adopted in the healthcare sector, as well as documentation used for evaluating the quality and effectiveness of healthcare organizations' operations. |
| Level 2 | |
| Level 3 | |
| **Be able to:** | |
| Level 1 | Conduct medico-statistical analysis of health indicators for the assigned population;<br><br>Maintain medical documentation, including in electronic form. |
| Level 2 | |
| Level 3 | |
| **Own:** | |

| | |
|---|---|
| Level 1 | Skills in managing and completing various types of medical record-keeping and reporting documentation in healthcare facilities;<br><br>Skills in performing comparative analysis of different forms of medical documentation in healthcare facilities. |
| Level 2 | |
| Level 3 | |

**As a result of mastering the course, the student should:**

| | |
|---|---|
| **3.1** | **Know:** |
| 3.1.1 | 3.1.1 Etiology, pathogenesis, and preventive measures for the most common pediatric surgical diseases; |
| 3.1.2 | 3.1.2 Modern classification of pediatric surgical diseases; |
| 3.1.3 | 3.1.3 Clinical presentation, features of the clinical course, and potential complications across different age groups; |
| 3.1.4 | 3.1.4 Fundamental principles of diagnosing surgical diseases in pediatric patients; |
| 3.1.5 | 3.1.5 Modern methods of clinical, laboratory, and instrumental examination of patients; |
| 3.1.6 | 3.1.6 Treatment methods and indications for their application; |
| 3.1.7 | 3.1.7 Fundamentals of organizing outpatient and polyclinic care for the population; |
| 3.1.8 | 3.1.8 Optimal timing for the surgical management of congenital malformations in children; |
| 3.1.9 | 3.1.9 Principles of follow-up care (dispensary observation) and rehabilitation of patients; |
| 3.1.10 | 3.1.10 Ethical and deontological aspects in pediatric surgery. |
| **3.2** | **Be able to:** |
| 3.2.1 | 3.2.1 Take a medical history from a surgical patient; |
| 3.2.2 | 3.2.2 Perform a physical examination of the patient; |
| 3.2.3 | 3.2.3 Interpret diagnostic findings (laboratory, radiological, and instrumental); |
| 3.2.4 | 3.2.4 Formulate a clinical diagnosis; |
| 3.2.5 | 3.2.5 Establish indications for the selected treatment method; |
| 3.2.6 | 3.2.6 Apply disease prevention strategies; |
| 3.2.7 | 3.2.7 Organize the medical transport of neonates with surgical conditions, visceral trauma, or burns; |
| 3.2.8 | 3.2.8 Complete and maintain patient medical records (case history). |
| **3.3** | **Own:** |
| 3.3.1 | 3.3.1 Various surgical techniques for acute abdominal surgical conditions in children; |
| 3.3.2 | 3.3.2 The timing and modalities of surgical interventions for gastrointestinal diseases in pediatric patients; |
| 3.3.3 | 3.3.3 Surgical approaches for the treatment of lung and pleural diseases in children; |
| 3.3.4 | 3.3.4 Conservative management strategies for congenital orthopedic conditions in pediatric patients; |
| 3.3.5 | 3.3.5 Treatment approaches for children with various bone fractures and traumatic injuries; |
| 3.3.6 | 3.3.6 Optimal surgical timing for children with congenital malformations; |
| 3.3.7 | 3.3.7 Management strategies for pediatric patients with urological conditions; |
| 3.3.8 | 3.3.8 Core principles of management for pediatric oncology patients; |
| 3.3.9 | 3.3.9 Practical application of endovideo surgical technologies in the diagnosis and management of acute abdominal surgical pathology in children. |

**4. STRUCTURE AND CONTENT OF THE DISCIPLINE (MODULE)**

| Class code | Title of sections and topics / Type of instructional activity / | Semester / Academic year | Hours | Competences | Literature | Interactive hours | Practical training | Notes |
|---|---|---|---|---|---|---|---|---|
| | **Section 1. Section 1. Features of** | | | | | | | |
| 1.1 | 1.1 Surgical management of congenital malformations. Timing of surgical intervention. /Pr/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 1.2 | 1.2 Surgical management of congenital malformations. Timing of surgical intervention. /Self/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 | | | |
| | **Section 2. Section 2. Acute Surgical Abdominal Diseases in Children** | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2.1 | 2.1 Acute appendicitis and peritonitis in pediatric patients. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 2.2 | 2.2 Acquired intestinal obstruction in children. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 2.3 | 2.3 Acute appendicitis and peritonitis in pediatric patients. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 2.4 | 2.4 Acquired intestinal obstruction in children. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 | | | |
| 2.5 | 2.5 Acute appendicitis and peritonitis in pediatric patients. /Self/ | 12 | 1 | | | | | |
| 2.6 | 2.6 Acquired intestinal obstruction in children. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| | **Section 3. Section 3. Congenital Malformations of the Gastrointestinal Tract in Children** | | | | | | | |
| 3.1 | 3.1 Congenital intestinal obstruction in children. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 3.2 | 3.2 Congenital intestinal obstruction in children. /Pr/ | 12 | 2 | | | | | |
| 3.3 | 3.3 Congenital hypertrophic pyloric stenosis in children. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 3.4 | 3.4 Anorectal malformations in children. Hirschsprung's disease. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 3.5 | 3.5 Congenital hypertrophic pyloric stenosis. /Self/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 3.6 | 3.6 Anorectal malformations in children. Hirschsprung's disease. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| | **Section 4. Section 4. Malformations and Diseases of the Esophagus** | | | | | | | |
| 4.1 | 4.1 Congenital esophageal malformations. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 | | | |
| 4.2 | 4.2 Esophageal chemical burns and their complications in pediatric patients. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 4.3 | 4.3 Congenital esophageal malformations. /Self/ | 12 | 1 | | | | | |
| | **Section 5. Section 5. Portal Hypertension Syndrome** | | | | | | | |
| 5.1 | 5.1 Anomalies and pathology of the biliary tract, spleen, and pancreas. Portal hypertension syndrome. Gastrointestinal bleeding in children. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 5.2 | 5.2 Anomalies and pathology of the biliary tract, spleen, and pancreas. Portal hypertension syndrome. Gastrointestinal bleeding in children. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Section 6. Section 6. Congenital Malformations Causing Acute Respiratory Insufficiency Syndrome** | | | | | | | |
| 6.1 | 6.1 Congenital diaphragmatic hernia, congenital lobar emphysema, tension pulmonary cyst, Pierre Robin sequence, choanal atresia. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 6.2 | 6.2 Congenital diaphragmatic hernia, congenital lobar emphysema, tension pulmonary cyst, Pierre Robin sequence, choanal atresia. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| | **Section 7. Section 7. Purulent Surgical Infections in Children** | | | | | | | |
| 7.1 | 7.1 Purulent-septic skin and subcutaneous tissue infections. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 7.2 | 7.2 Purulent-septic skin and subcutaneous tissue infections. /Self/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 7.3 | 7.3 Acute hematogenous osteomyelitis, epiphyseal osteomyelitis. Chronic hematogenous and primary chronic osteomyelitis. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 7.4 | 7.4 Acute hematogenous osteomyelitis, epiphyseal osteomyelitis. Chronic hematogenous and primary chronic osteomyelitis. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 7.5 | 7.5 Acute hematogenous osteomyelitis, epiphyseal osteomyelitis. Chronic hematogenous and primary chronic osteomyelitis. /Self/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, E3. | | | |
| 7.6 | 7.6 Acute and chronic suppurative lung diseases in children. Necrotizing/destructive pneumonia: classification, clinical features, and management. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1 | | | |
| 7.7 | 7.7 Acute and chronic suppurative lung diseases in children. Necrotizing/destructive pneumonia: classification, clinical features, and management. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, E3. | | | |
| 7.8 | 7.8 Acute and chronic suppurative lung diseases in children. Necrotizing/destructive pneumonia: classification, clinical features, and management. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, E3. | | | |
| | **Section 8. Section 8. Diseases and Malformations of the Urinary System** | | | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 8.1 | 8.1 Congenital anomalies of the upper and lower urinary tract in children. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8.2 | 8.2 Congenital anomalies of the upper and lower urinary tract in children. /Pr/ | 12 | 2 | | | | | |
| 8.3 | 8.3 Hydrocele, cryptorchidism, testicular ectopia: diagnosis and management. /Pr/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, | | | |
| 8.4 | 8.4 Malformations of the upper urinary tract. Hydrocele, hypospadias, epispadias, cryptorchidism, bladder exstrophy. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, E3. | | | |
| 8.5 | 8.5 Developmental anomalies associated with patent processus vaginalis, cryptorchidism. /Self/ | 12 | 1 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, | | | |
| | **Section 9. Section 9. Features of Pediatric Traumatology and Orthopedics** | | | | | | | |
| 9.1 | 9.1 Specifics of limb bone fractures in children. Birth trauma. /Lec/ | 12 | 2 | | | | | |
| 9.2 | 9.2 Specifics of limb bone fractures in children. Birth trauma. /Pr/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5 E1, E3. | 2 | | Interactive Activity: "Clinical Case: Guess the Age and Injury" |
| 9.3 | 9.3 Congenital dislocation of the hip, clubfoot, congenital muscular torticollis. /Pr/ | 12 | 2 | | | 2 | | Interactive Activity: "Fact or Myth?" |
| 9.4 | 9.4 Specifics of limb bone fractures in children. Birth trauma. /Self/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 9.5 | 9.5 Congenital dislocation of the hip, clubfoot, congenital muscular torticollis. /Lec/ | 12 | 2 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 9.6 | 9.6 Congenital dislocation of the hip, clubfoot, congenital muscular torticollis. /Self/ | 12 | 2,7 | | L1.1 L1.2L2.1 L2.2 L2.3 | | | |
| 9.7 | 9.7 Continuous Monitoring Assessment / Final Test /CrTO/ | 12 | 0,3 | | | | | |

## 5. ASSESSMENT TOOL KIT (ATK)

### 5.1. Control questions and assignments

CONTROL EXAM QUESTIONS IN PEDIATRIC SURGERY.

1. Structure of pediatric medical and preventive institutions, features of their organization and interaction.
2. History of the formation and development of modern pediatric surgery. Russian and Kyrgyz schools.
3. Anatomical and physiological characteristics of children from the perspective of a pediatric surgeon.
4. Deontological aspects in pediatric surgery from the perspective of "sick child + parents + physician".
5. Congenital surgical malformations. Causes, etiopathogenesis. Concepts of organ agenesis, aplasia, and hypoplasia. Methods of prevention and early diagnosis. Organization of pediatric surgical services for congenital malformations.
6. Pathology of the vaginal process of the peritoneum (inguinal hernia, hydrocele, cord cyst). Embryogenesis, diagnostic methods, complications, and treatment. Timing of surgical treatment.
7. Anterior abdominal wall hernias in children: umbilical, linea alba, and ventral hernias. Clinical presentation and diagnosis. Treatment methods.
8. Malformations of blood and lymphatic vessels. Clinical presentation, diagnosis, and treatment.
9. Acute appendicitis in children. Clinical features in children under 3 years of age, "biphasic" course, and diagnostic and treatment features in children.
10. Preoperative and postoperative complications of acute appendicitis. Appendiceal infiltrate and abscess. Clinical presentation, diagnosis, and management tactics.
11. Peritonitis in children. Classification of peritonitis in children. Appendiceal, cryptogenic, and ascitic peritonitis. Clinical presentation of appendiceal, diplococcal, and ascitic peritonitis. Preoperative preparation tactics and treatment depending on the

stage of peritonitis.
12. Acquired intestinal obstruction in children. Classification and clinical presentation of intestinal obstruction in children. Diagnosis, differential diagnosis, and the value of X-ray and ultrasound examinations.
13. Intussusception in children. Definition, classification, and clinical presentation of intussusception. Tactics of a general surgeon. Diagnosis, differential diagnosis, tactics of conservative and surgical treatment.
14. "Acute abdomen and congenital intestinal obstruction" syndrome in newborns and infants. Etiology, pathogenesis, classification, clinical presentation, diagnosis, differential diagnosis, tactics of a family physician (FMC). Principles of treatment in newborns with congenital intestinal obstruction and peritonitis.
15. "Milk vomiting" syndrome in infants. Congenital hypertrophic pyloric stenosis. Etiology, pathogenesis, classification, clinical presentation, diagnosis, differential diagnosis, tactics of a physician (FMC, FGP).
16. Anterior abdominal wall malformations (gastroschisis, omphalocele). Pathologies of the vitelline and urachal ducts, complete and incomplete umbilical fistulas. Etiopathogenesis, classification, clinical presentation, complications, and diagnosis.
17. Congenital anorectal malformations. Etiopathogenesis. Classification, clinical presentation, complications, diagnosis, differential diagnosis, and treatment. Tactics of neonatologists and physicians in FMCs.
18. Hirschsprung's disease, megacolon, colonic dysfunction, and chronic constipation in children.
19. Rectal prolapse, anal fissures, polyps, hemorrhoids, and chronic paraproctitis. Etiopathogenesis, clinical presentation, diagnosis, differential diagnosis, tactics of FMC physicians, principles of treatment. Examination and treatment algorithm.
20. Esophageal malformations. Congenital esophageal atresia, tracheoesophageal fistulas, esophageal stricture, chalasia, and achalasia of the esophagus.
21. Esophageal burns in children. Etiopathogenesis, classification, clinical presentation, diagnosis, differential diagnosis, immediate and late complications. Physician tactics for emergency care at pre-hospital and hospital stages.
22. Cicatricial esophageal strictures. Clinical presentation and diagnosis. Principles of treatment. Rehabilitation and follow-up care (dispensary observation).
23. Portal hypertension syndrome: definition, causes, etiopathogenesis. Clinical presentation of prehepatic, intrahepatic, and posthepatic forms of portal block. Complications and diagnosis. Modern research methods. Tactics of conservative and surgical treatment.
24. Anomalies of development and pathologies of the spleen and pancreas in children. Acute cholecystitis and acute pancreatitis: classification, clinical presentation, differential diagnosis, tactics in examination and treatment.
25. Internal organ echinococcosis (hydatid disease): clinical presentation, complications, diagnosis, differential diagnosis, tactics in examination and treatment. Value of ultrasound examination, MRI, and CT.
26. Acute respiratory failure syndrome caused by malformations of the upper respiratory tract (choanal atresia, Pierre Robin syndrome, ranula, macroglossia, basal encephalocele) and pathology of the thoracic organs (congenital lobar emphysema, tension lung cyst, pulmonary atelectasis, pulmonary agenesis and aplasia, pneumothorax, hydrothorax, pyothorax, mediastinal tumors, strangulated diaphragmatic hernia) in newborns. Etiology, pathogenesis, classification, clinical presentation, diagnosis, differential diagnosis, tactics of FMC and FGP physicians.
27. Whitlow (Panaritium). Classification of whitlow. Phlegmon, abscessing furunculosis, lymphadenitis, and erysipelas in children: clinical presentation, diagnosis, and treatment.
28. Paraproctitis. Etiopathogenesis, clinical presentation, diagnosis, complications, and treatment.
29. Acute hematogenous osteomyelitis and epiphysial osteomyelitis. Definition. Classification and clinical presentation of adynamic, septico-pyemic, and local-focal forms of acute hematogenous osteomyelitis in children. Diagnosis and differential diagnosis. Treatment tactics, indications for osteoperforation. Tactics for treating children with epiphysial osteomyelitis. Follow-up care (dispensary observation) and rehabilitation.
30. Classification of chronic hematogenous and primary chronic osteomyelitis in children. Complications, clinical presentation, tactics in treatment, follow-up care (dispensary observation), and rehabilitation.
31. Hydronephrosis: definition and causes. Clinical signs depending on the degree of hydronephrotic transformation. Diagnosis. Indications for surgical treatment. Modern methods of correcting the pathology. Complications, prognosis, follow-up care (dispensary observation), and rehabilitation.
32. Obstructive pyelonephritis, paranephritis, pyonephrosis, and cystitis in children. Etiopathogenesis, clinical presentation, diagnosis, and treatment. Follow-up care (dispensary observation) and rehabilitation.
33. Malformations of the upper urinary tract. Classification of developmental anomalies of the kidneys and urinary tract. Clinical manifestations depending on the anomaly. Diagnostic methods.
34. Hypospadias, epispadias, and bladder exstrophy. Clinical presentation, diagnosis, and treatment.
35. Cryptorchidism: definition, classification, clinical presentation, diagnosis, and treatment. Complications.
36. Phimosis and paraphimosis. Clinical presentation, diagnosis, and treatment.
37. Features of bone fractures in children. Pediatric traumatism and prevention of pediatric trauma.
38. Upper extremity bone injuries, common localization, and typical fractures. Clinical signs, diagnosis, first aid, and principles of treatment.
39. Lower extremity bone fractures in children. Classification. Principles of treatment depending on the child's age.
40. Traumatic brain injury in children. Classification. Clinical features depending on age. Diagnosis. Indications for CT and MRI. Treatment, complications, prognosis, and rehabilitation.
41. Spinal fractures in children. Mechanism of injury, common localization, etiology, and classification. Compression fracture of the spine.
42. Pelvic bone fractures in children. Classification. Clinical presentation depending on the type of fracture. Diagnosis and treatment.
43. Birth injuries in children. Concept of birth injury. Incidence and causes of birth injuries in newborns. Predisposing factors, pathogenesis, and types of birth injuries. Clinical signs, diagnosis, and treatment.
44. Cephalohematoma, fracture of the clavicle, humerus, and femur, injuries of the spine and spinal cord.
45. Closed injuries of internal organs. Mechanism of injury, localization, differential diagnosis, timing and tactics of treatment,

complications, prognosis, and rehabilitation.
46. Congenital dislocation of the hip. Classification, etiopathogenesis, early clinical symptoms. Clinical presentation, diagnosis (radiological and ultrasound) in various age groups. Complications and conservative treatment.
47. Congenital clubfoot. Classification and diagnosis. Treatment principles and methods: plaster casting, superelastic structures, soft bandages; indications for surgical treatment.
48. Torticollis. Causes, symptoms, and clinical forms. Differential diagnosis. Timing and principles of conservative and surgical treatment. Follow-up care (dispensary observation) and rehabilitation.
49. Syndactyly, polydactyly, congenital clubhand, and synostoses. Clinical presentation, diagnosis, and treatment.
50. Features of pediatric intensive care and resuscitation. Traumatic shock in children: definition, etiopathogenesis, classification, clinical presentation, diagnosis, and pre-hospital care.

**5.2. Topics of term papers (projects)**

Courseworks and course projects are not provided for in the curriculum.

**5.3. Assessment tool kit**

Tests (Appendix No. 1)
Case studies / Situational tasks (Appendix No. 2)
Report (Appendix No. 3)
Essay / Term paper (Appendix No. 4)
Control work / Written test (Appendix No. 5)
Presentation (Appendix No. 6)
Practical skills (Appendix No. 7)
Medical history / Case report (Appendix No. 8)

**5.4. List of types of assessment tools**

Test
Report
Essay / Term paper
Control work / Written test
Presentation
Practical skills
Medical history / Case report
Grading scales by types of assessment tools in Appendix No. ---.
Grading scales

**6. EDUCATIONAL, METHODOLOGICAL, AND INFORMATIONAL SUPPORT OF THE DISCIPLINE (MODULE)**

**6.1. Recommended literature**

**6.1.1. Main literature**

| | Authors, compilers | Title | Publisher, year |
|---|---|---|---|
| L1.1 | Omurbekov T.O., Mykyev K.M., Shakirova U.Sh. | Selected Issues of Pediatric Surgery: Study Guide | Bishkek: KRSU Publishing House 2015 |
| L1.2 | Mykyev K. M. | Chest Wall Malformations in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2015 |
| L1.3 | Mykyev K. M. | Congenital Malformations Causing Acute Respiratory Failure Syndrome in Children: Educational Guidelines | Bishkek: KRSU Publishing House 2015 |
| L1.4 | Mykyev K.M., Kochkunov D.S. | Acute Bacterial Destruction of the Lungs (ABDL) in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2015 |
| L1.5 | Mykyev K. M. | Acute Appendicitis in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2015 |
| L1.6 | Mykyev K.M., Shakirova U.Sh. | Intussusception: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2015 |
| L1.7 | Mombekov V.A., Mykyev K.M. | Congenital Dislocation of the Hip in Children (Etiology, Diagnosis, Clinical Presentation, and Treatment): Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2016 |
| L1.8 | Mykyev K.M., Shakirova U.Sh., Kochkunov D.S. | Osteomyelitis in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2016 |
| L1.9 | Mykyev K. M. | Congenital Esophageal Malformations in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2015 |

| | Authors, compilers | Title | Publisher, year |
|---|---|---|---|
| L1.10 | Poroshchay V.N., Mykyev K.M. | Congenital Malformations of the Upper Urinary Tract (Kidneys, Ureters) in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2016 |
| L1.11 | Mykyev K. M. | Anterior Abdominal Wall Hernias in Children (Inguinoscrotal, Umbilical, Linea Alba, Femoral): Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2017 |
| L1.12 | Mykyev K.M., Zamirbekov K.Z. | Encephaloceles and Spina Bifida in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2017 |
| L1.13 | Omurbekov T.O., Mykyev K.M., Shakirova U.Sh. | Selected Issues of Pediatric Surgery: Study Guide | Bishkek: KRSU Publishing House 2015 |
| L1.14 | Mykyev K.M., Shakirova U.Sh., Kochkunov D.S. | Esophageal Burns in Children (Etiology, Clinical Presentation, Complications, and Treatment): Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House 2017 |
| L1.15 | Mykyev K.M., Ibraimov Sh.A., Zamirbekov K.Z. | Malformations and Diseases of the Anorectal Region in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House, 2018 |
| L1.16 | Mykyev K.M., Namanov A.A., Zamirbekov K.Z. | Congenital Pyloric Stenosis in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House, 2018 |
| L1.17 | Mykyev K.M., Omurbekov T.O., Shakirova U.Sh. | Selected Issues of Pediatric Surgery: Study Guide | Bishkek: KRSU Publishing House, 2018 |
| L1.18 | Mykyev K.M., Omurbekov T.O., Shakirova U.Sh. | Course of Lectures on Pediatric Surgery: Study Guide | Bishkek: KRSU Publishing House 2019 |
| L1.19 | Mykyev K.M., Poroshchay V.N., Namanov A.A. | Urolithiasis (Urolithiasis Disease) in Children: Educational Guidelines for Pediatrics and General Medicine Students | Bishkek: KRSU Publishing House, 2018 |
| **6.1.2. Supplementary literature** | | | |
| | Authors, compilers | Title | Publisher, year |
| L2.1 | Mykyev K. M. | Mykyev K. M. Prolonged and Chronic Cough in Children from a Pediatric Surgeon's Perspective | |
| L2.2 | Mykyev K. M. | Congenital Lobar Emphysema in Children | |
| L2.3 | Mykyev K.M., Omurbekov T.O., Nurmukhamedov T.N. | Frequently Ailing Children from a Pediatric Surgeon's Perspective | |
| L2.4 | Mykyev K.K., Khoperskaya L.L. | Competition of Geopolitical Concepts in the Eurasian Space: Graduation Thesis. | Bishkek, 2023 |
| L2.5 | Mykyev K.M., Zamirbekov K.Z. | Encephalocele and Spina Bifida in Children: Guidelines for Pediatrics and General Medicine Students. | Bishkek: KRSU Publishing House, 2017 |
| **6.2. List of resources of the "Internet" information and telecommunication network** | | | |
| E1 | E1 Website of the Russian Association of Pediatric Surgeons | | http://www.radh.ru |
| E2 | E2 Federal Clinical Guidelines for the Management of Acute Appendicitis in Children | | http://www.radh.ru/appendicite_guidelines_new.pdf |
| E3 | E3 Federal Clinical Guidelines for the Management of Inguinal Hernia Incarceration in Children | | http://www.radh.ru/hernia_guidelines_new.pdf |
| E4 | E4 Federal Clinical Guidelines for the Management of Esophageal Atresia | | http://www.radh.ru/atresia%20of% |
| E5 | E5 Federal Clinical Guidelines for the Diagnosis and Management of Intussusception | | http://www.radh.ru/invaginacia_guidelines_new.pdf |
| E6 | E6 Federal Clinical Guidelines for the Management of Anorectal Malformations in Children | | http://www.radh.ru/anorectal_guidelines.pdf |
| E7 | E7 Federal Clinical Guidelines for the Management of Short Bowel Syndrome in Children | | http://www.radh.ru/short_intestinal_guidelines_new.pdf |
| E8 | E8 Federal Clinical Guidelines for the Management of Myelodysplasia in Children | | http://www.radh.ru/mielodisplasia_guidelines.pdf |

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|---|---|---|
| E9 | E9 Federal Clinical Guidelines for the Management of Osteomyelitis in Children | http://www.radh.ru/osteo_guidelines.pdf |
| E10 | E10 Federal Clinical Guidelines for the Management of Cryptorchidism in Children | http://www.radh.ru/kriptorch_guidelines.pdf |
| E11 | E11 Federal Clinical Guidelines for the Management of Varicocele in Children | http://www.radh.ru/varikocele_guidelines_new.pdf |
| E12 | E12 Federal Clinical Guidelines for the Management of Hydrocele in Children | http://www.radh.ru/Hidrozele_guidelines_new.pdf |
| E13 | E13 Russian Journal of Pediatric Surgery, Anesthesia and Intensive Care | http://ps-journal.ru |

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| **6.3. List of informational and educational technologies** | |
| **6.3.1 Competency-oriented educational technologies** | |
| 6.3.1.1 | 6.3.2.1 Electronic Library System "ZNANIUM.COM" |
| 6.3.1.2 | 6.3.2.2 Information System "Single Window of Access to Educational Resources" (http://window.edu.ru/) |
| 6.3.1.3 | 6.3.2.3 www.med-edu.ru/articles |
| 6.3.1.4 | 6.3.2.4 medvuz.info/load/nervnye_bolezni_nevrologija/25 |
| 6.3.1.5 | 6.3.2.5 Electronic Library of KRSU www.lib.krsu.kg |
| 6.3.1.6 | 6.3.2.6 Electronic Library of the Ministry of Health of the Kyrgyz Republic |
| **6.3.2 List of informational reference systems and software** | |
| 6.3.2.1 | 6.3.1 Competency-Oriented Educational Technologies |
| 6.3.2.2 | 6.3.1.1 The main requirement for educational technologies currently used in teaching students pediatric surgery is the extensive application of active and interactive forms of training. These include students' independent work with patients, faculty analysis of specific clinical situations encountered by students during patient supervision, computer simulations, business and role-playing "games," various forms of programmed knowledge control, etc. In accordance with the requirements of the Federal State Educational Standards of Higher Professional Education (FSES HPE), the share of classes conducted in interactive forms is at least 20% of classroom time. |
| 6.3.2.3 | 6.3.1.2 Great importance is also attached to extracurricular independent work of students (see above), for which an additional 108 hours are allocated. |
| 6.3.2.4 | 6.3.1.3 The study of the pediatric surgery course in the 5th and 6th years of the Faculty of Medicine (9th, 10th, and 11th semesters) is optimal for pediatric faculty students. |
| 6.3.2.5 | 6.3.1.4 Teaching of the pediatric surgery course is conducted at the clinical bases of specialized pediatric surgical departments. |
| 6.3.2.6 | 6.3.1.5 The lecture course accounts for no more than 30% of total classroom hours. Lecture topics precede the topics of practical classes. Various visual aids and technical teaching equipment (educational videos, animation clips, slides, recordings, charts, diagrams, etc.) are widely used during lectures. |
| 6.3.2.7 | 6.3.1.6 When structuring a practical session, instructors adhere to the following general outline: |
| 6.3.2.8 | 6.3.1.7 1) Organizational stage of the session (time – up to 2%): |
| 6.3.2.9 | 6.3.1.8 a) roll call; |
| 6.3.2.10 | 6.3.1.9 b) homework assignment for the next topic; |
| 6.3.2.11 | 6.3.1.10 c) motivation for the topic of the current practical session; |
| 6.3.2.12 | 6.3.1.11 d) familiarizing students with the objectives and plan of the session; |
| 6.3.2.13 | 6.3.1.12 2) Control and correction of the baseline knowledge level (time – up to 20%): |
| 6.3.2.14 | 6.3.1.13 a) Level I and III test control options; |
| 6.3.2.15 | 6.3.1.14 b) instructor's correction of students' theoretical knowledge; |
| 6.3.2.16 | 6.3.1.15 3) Demonstration stage by the instructor of practical skills and/or thematic patients (time – up to 15%); |
| 6.3.2.17 | 6.3.1.16 4) Stage of independent student work at the patient's bedside (time – up to 45%); |
| 6.3.2.18 | 6.3.1.17 5) Final stage of the session (time – up to 18%): |
| 6.3.2.19 | 6.3.1.18 a) final evaluation of acquired practical skills and abilities during the discussion of patients examined by students; |
| 6.3.2.20 | 6.3.1.19 b) final evaluation of acquired theoretical knowledge and skills, including through the solution of situational clinical cases; |

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| 6.3.2.21 | 6.3.1.20 c) summarizing the results of the practical session (instructor's assessment of students' fulfillment of all session objectives and individual evaluation of knowledge and skills). |
| 6.3.2.22 | 6.3.1.21 Control of students' baseline knowledge, as well as final (summary) evaluation, can be carried out orally or through tests and situational tasks. |
| 6.3.2.23 | 6.3.1.22 The most critical stage of a practical session is independent work by students in the ward at the patient's bedside, dressing room, operating room, functional diagnostics room, procedure room, etc. Depending on the specific topic of the session, students independently take patient histories, perform physical examinations, palpation, percussion, auscultation, wound dressings, etc. Clinical case presentations of thematic patients involving the entire group of students should be conducted during the session. Quality of independent work and acquired skills are monitored during the case review. The instructor individually evaluates each student's achievement of practical session goals. |
| 6.3.2.24 | 6.3.1.23 During the semiotics course, students may prepare several fragments of a medical history formatted according to the medical history scheme based on independent patient supervision (curation) for respiratory surgical diseases, purulent-septic pathologies, abdominal, urological, neurosurgical, proctological, elective, and emergency surgical diseases. |
| 6.3.2.25 | At the end of the academic year, upon completing the study of special pathology fundamentals, students submit a final (examination) medical history containing a detailed description of personal data, history taking, physical examination, laboratory and instrumental diagnostic findings, clinical diagnosis with justification, and a plan for further clinical, laboratory, and instrumental evaluation. |
| 6.3.2.26 | 6.3.1.24 The development of the curriculum and thematic teaching plan also accounted for |
| 6.3.2.27 | 6.3.1.25 the necessity of conducting specialized practical classes in laboratory diagnostics and instrumental examination methods (bronchoscopy, bronchography, cystoscopy, cystography, excretory urography, irrigography, contrast studies of congenital and acquired fistulas, ECG, ultrasound, plain radiography, etc.). |
| 6.3.2.28 | 6.3.1.26 In lecture and practical courses on semiotics, special emphasis is placed on a syndromic approach to diagnosis, mastery of which is an essential condition for developing clinical thinking in students. In studying special pathology issues, primary attention should be paid to the symptomatology of the most common emergency and elective surgical diseases and congenital malformations in children, prevalent purulent-septic pathologies, characteristics of pediatric trauma and fractures, and principles of treatment, follow-up care (dispensary observation), and rehabilitation. Minimal time is devoted to etiology and pathogenesis of individual nosological entities; they are studied only to the extent necessary to understand the mechanisms of typical symptoms and syndromes characteristic of a given disease. |
| 6.3.2.29 | It is also appropriate to briefly cover the primary methods of surgical treatment. |
| 6.3.2.30 | 6.3.1.27 Lecture presentations (PowerPoint) |
| 6.3.2.31 | 6.3.1.28 Electronic library (digital editions) |
| 6.3.2.32 | 6.3.1.29 Educational video films prepared at the department by Assoc. Prof. Mykyev K.M.: |
| 6.3.2.33 | 6.3.1.30 Acute appendicitis in children: physical examination of the patient; differential diagnosis of acute appendicitis in children, conventional appendectomy in children; laparoscopic appendectomy in children; |
| 6.3.2.34 | 6.3.1.31 Airway foreign bodies in children: diagnostics and removal techniques |
| 6.3.2.35 | 6.3.1.32 Esophageal foreign bodies in children |
| 6.3.2.36 | 6.3.1.33 Circumcision in children |
| 6.3.2.37 | 6.3.1.34 Intestinal disinvagination (reduction of intussusception) |
| 6.3.2.38 | 6.3.1.35 Splenectomy / Splenic cyst excision (laparoscopic) |
| 6.3.2.39 | 6.3.1.36 Esophagogastroplication in children (laparoscopic) for esophageal chalasia |
| 6.3.2.40 | 6.3.1.37 Diaphragmatic hernia repair in children (thoracoscopic) |
| 6.3.2.41 | 6.3.1.38 Ovarian cystectomy in a girl (laparoscopic) |

| **7. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE (MODULE)** | |
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| 7.1 | 7.1 Theoretical and practical training in the pediatric surgery curriculum is conducted at the surgical departments of the National Center of Maternity and Childhood Welfare (NCMCW), which includes the following specialized pediatric surgical departments: |

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| 7.2 | 7.2 Department of Congenital Malformations Surgery, |
| 7.3 | 7.3 Department of Neurosurgery, |
| 7.4 | 7.4 Department of Surgical Infections, |
| 7.5 | 7.5 Department of Urology, |
| 7.6 | 7.6 Department of Maxillofacial Surgery, |
| 7.7 | 7.7 Department of Neonatal Surgery, |
| 7.8 | 7.8 Neonatal Intensive Care Unit (NICU), |
| 7.9 | 7.9 General Intensive Care Unit (ICU). |

## 8. METHODOLOGICAL GUIDELINES FOR STUDENTS ON MASTERING THE DISCIPLINE (MODULE)

Recommendations for Organizing Student Independent Work

1. Advice on planning and organizing the time required to study the discipline. It is recommended to organize the time needed to study the discipline as follows:
Reviewing lecture notes on the same day after the lecture – 10-15 minutes.
Reviewing lecture notes the day before the next lecture – 10-15 minutes.
Studying theoretical material using textbooks and notes – 1 hour per week.
Preparation for practical classes – 2 hours.
Total per week – 3 hours 30 minutes.
2. Description of the sequence of student actions
For effective understanding and high-quality mastery of the material, the following sequence of actions is recommended:
After attending the lecture and finishing classes, when preparing for the next day's classes, you should first review and reflect on the text of the lecture attended today (10-15 minutes).
When preparing for the next day's lecture, you should review the text of the previous lecture and consider the potential topic of the upcoming lecture (10-15 minutes).
Set aside time during the week (1 hour) to work with recommended literature in the library.
When preparing for the next day's practical classes, it is necessary to first read the basic concepts and approaches related to the homework topic. When completing an exercise or task, first understand what is required in the problem, which theoretical material should be applied, and outline a solution plan.
3. Recommendations on the use of educational materials and teaching kits.
It is recommended to use the course study guides (Appendix No. ) and the instructor's lecture transcripts.
4. Recommendations for working with literature.
The theoretical material of the course becomes clearer when, in addition to attending lectures and reviewing notes, textbooks are studied as well. Mastering the course is easier when sticking to a single core textbook and class notes. It is recommended, beyond simple memorization, to achieve a state of deep comprehension of the studied topics. For this purpose, after studying a section, it is recommended to perform several simple exercises on the topic. Additionally, it is very useful to mentally ask yourself (and attempt to answer) the following questions: what is this section about, what new concepts were introduced, what is their meaning, and what practical application do they have.
5. Advice on preparing for midterm and interim assessments.
In addition to reviewing lecture notes, it is essential to use textbooks. Beyond memorization, achieving a state of comprehension of the studied topics is crucial. For this purpose, completing several exercises on the topic after studying each section is recommended. Furthermore, it is very helpful to mentally reflect on the following questions:
● What is this section about?
● What new concepts were introduced?
● What is their meaning?
● What practical application do they have?
When preparing for interim control, study the theory (definitions of all concepts and evaluation approaches) until a clear understanding of the material is reached, and independently solve several typical problems from each topic. When solving tasks, one must always be able to properly interpret the results obtained.
6. Instructions for organizing homework completion.
When completing homework assignments, first read the basic concepts and approaches related to the task topic. When performing an exercise or problem, first understand what is required, identify the theoretical material needed, outline a solution plan, proceed with calculations, and formulate a sound conclusion.

Preparation of a class report
Main stages of report preparation:

* Selection of the topic;
* Consultation with the instructor;
* Drafting a report outline;
* Working with sources and literature, collecting material;
* Writing the report manuscript;
* Formatting the manuscript and submitting it to the instructor prior to the report presentation, which determines the student's readiness to speak;
* Delivering the presentation and answering questions.

Report topics are provided by the instructor in the assessment tool funds (FOS).

Recommendations for writing an essay (term paper)
The topic of the essay is selected in agreement with the instructor. It is important that the essay:
● First, addresses both the scientific and social aspects of the problem;
● Second, presents both general theoretical foundations and specific clinical examples.
The essay must be based on the analysis of several supplementary literature sources beyond the core textbook. As a rule, these include specialized monographs or journal articles. It is also recommended to use popular science and professional medical journals as supplementary literature ("Pediatric Surgery", "Vestnik KRSU", "Healthcare of Kyrgyzstan", "Vestnik KSMA", etc.), as well as newspapers specializing in medical subjects.
The outline of the essay must be original, reflecting the author's approach, perspective, and analysis of the problem. All facts and borrowed ideas presented in the essay must be accompanied by citations and references to the source of information.
It is unacceptable to simply compile an essay from fragments of borrowed text. All direct quotes must be enclosed in quotation marks, with the source and page number indicated in parentheses. The absence of quotation marks and references constitutes plagiarism and, in accordance with established scientific ethics, is considered a gross violation of copyright.
The essay is formatted as text on standard A4 paper. It begins with a title page indicating the name of the university, academic discipline, essay topic, student's full name, academic group number, year, and geographical location of the university. This is followed by a table of contents indicating section page numbers. The main body of the essay should ideally be divided into sections: chapters and subchapters with appropriate headings. The inclusion of quantitative data and illustrations (charts, tables, diagrams, figures) in the essay is encouraged.
The essay concludes with "Conclusion" and "References" sections. The conclusion presents the main findings, clearly formulated in bullet points and typically numbered.
The bibliography must be compiled in full accordance with current citation standards (formatting rules), including proper punctuation. For guidance, any book published by major academic publishing houses may be used as an example: "GEOTAR-Media", "Progress", "Mir", "MSU Publishing House", etc., or the reference lists provided above. In general, the most common bibliographic reference formats used are as follows:
Author I.O. Book Title. Place of publication: Publisher, Year of publication. Total page count.
Author I.O. Article Title // Journal Title. Year of publication. Volume. Issue No. Pages from to .
Author I.O. Article Title / Collection Title. Place of publication: Publisher, Year of publication. Pages from to .