1INTERNATIONAL HIGHER SCHOOL OF MEDICINE

Department of Pediatrics

SYLLABUS
PRACTICAL SKILLS IN PEDIATRICS (elective courses)

2025-2026 academic year
for students of medical faculty
3 course V semester,
2 credits (60 h, including auditorial 36 h, independent work – 24 h)

Practical classes:	**ass. Prof. G.T. Nazhimidinova** **+996 700 160 061** **E-mail:** nt_gulmira@mail.ru
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	Zholdosheva I.M. +996 703 150 015 phone (Whatsapp) Email: indiraneonatolog@mail.ru
Venue:	National Center Maternity and Childhood Welfare , Str Togolok Moldo, 1A
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Venue:	CMH 2, Moskovskaya str, 148

The Syllabus is considered
at the meeting of the department of Pediatrics
Protocol № 2 dated 01.09.2025
Head of the department

Course Objective: -to develop students' practical skills in examining children of different ages and clinical recognition of the most common pathologies in childhood.

After study of the discipline the student must:

Knowledge:

1. The essence of methods for clinical, laboratory and functional examination of the body of children.
2. Specificity of the main syndromes of damage to organs and systems in the most common diseases.
3. The essence of normal biochemical processes at the level of organs, systems and the body as a whole, as well as standards for the results of biochemical and clinical studies.
4. Indicators of biochemical and clinical studies confirming the diagnosis.

Skill:

1. Analyze the results of clinical, laboratory and functional examination of children's bodies, taking into account their specifics, in order to diagnose major diseases.
2. Group disease syndromes into nosological forms based on methods of clinical, laboratory and functional examination of children to diagnose diseases and pathological processes.
3. Recognize and interpret the results of biochemical and clinical studies, highlight logical relationships between changes in biochemical parameters and the clinical state of the body.
4. Analyze the results of biochemical and clinical studies to identify the main criteria confirming the clinical diagnosis.

Attitude:

1. Skills in conducting basic clinical, laboratory and functional examinations of children.
2. Skills in substantiating and formulating a diagnosis based on the results of clinical, laboratory and functional examinations of children.
3. Skills in making a preliminary diagnosis based on the results of biochemical and clinical studies.
4. Skills in reasoned substantiation of clinical diagnosis.

Pre-requisites:

- Macro- and microanatomy
- Normal physiology
- Pathology (pathological anatomy and pathological physiology)
- Biochemistry
- Propaedeutics of childhood diseases

Post-requisites:

- Pediatrics
- Pediatric surgery
- Pediatric infectious diseases
- Obstetrics and gynecology

THEMATIC PLAN OF PRACTICAL CLASSES

№	Theme of practical class	Hours	Date
1	Taking history and examination of children with upper and lower respiratory tract obstruction syndromes.	4	
2	Taking history, examination and diagnosis of children with congenital heart defects (CHD)	4	
3	Taking history and examination of children with anemia. Interpretation of the results of laboratory and instrumental research methods for anemia.	4	
4	Taking history, examination and diagnosis of children with bleeding.	4	
5	Module № 1	2	
6	Taking history, examination and diagnosis of children with GERD and gastritis.	2	
7	Taking history, examination and diagnosis of children with enterocolitis.	2	
8	Taking history, examination and diagnosis of children with hepatitis.	4	
9	Taking history, examination and diagnosis of children with biliary dyskinesia.	4	
10	Taking history, examination and diagnosis of children with upper urinary tract infection.	2	
11	Taking history, examination and diagnosis of children with lower urinary tract infection.	2	
12	Module № 2	2	
	Total	36	

Recommended reading for the discipline:

Basic:

No.	**Authors**	**Title**	**The year of publishing**	**publishing house**	**Availability in the IHSM library (number)**
1	Kliegman RM, Geme III JW	Nelson textbook of pediatrics.Vol.1.-21th ed.	2020	9 996 128 296	50
2	Ghai OP, Paul VK, Bagga A.	Essentials of pediatrics.-8th ed.	2013	978-81-239-2334-5	9
3	Alekseev.V, Starodubetz.U ., Isakova F.	Introduction to Pediatrics: Compendium for foreign student	2012	978-9967-26-670-4	342
4	Pervez Akber Khan	"Basis of Pediatrics"	2000	7th -E d –	https://ketabton.com/book/14837

Additional:

№	**Authors**	**Title**	**The year of publishing**	**publishing house**	**Availability in the IHSM library (number)**
1	Mark W. Kline	Rudolph's Pediatrics 23rd edition	2011	ISBN 978-1-260-01140-1	https://accesspediatrics.mhmedical.com/content.aspx?bookid=2126&sectionid=191260599

2	Lewis Potter	Geeky Medics	2023		https://geekymedics.com

Grading policy and procedures for all types of work
For the period of studying the discipline, the student gains points for the relevant parameters (per unit):
current score - 40 points
independent work - 20 points
control score (final assessment of knowledge per unit) - 40 points
Maximum score - 100 (40+20+40)

Grading system for student's achievements

Criteria for grading for the discipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control – 40	0-23	24-30	31-35	36-40
Interval description	Does not complete the task, does not know, which prevents further assimilation of the program; cannot apply the acquired knowledge to solving situational problems. Does not answer teacher's questions Does not have practical skills when examining a patient	Performs the task not in full, has difficulty in applying knowledge to solve situational problems; does not fully and accurately answer the questions of the teacher. When examining a patient, he has poor practical skills	Completes the task in full, but sometimes makes mistakes when solving situational problems, gives correct answers to the teacher's questions. When examining a patient, he partially possesses practical skills	Completes the task in full, easily applies knowledge and skills in solving situational problems, rarely makes mistakes, gives complete and correct answers to the teacher's questions. When examining a patient, he has full practical skills
Independent work – 20	0-11	12-14	15-17	18-20
Interval description	situational task is missing	Situational tasks contain little description of a clinical case	Situational tasks incompletely contain a description of a clinical case	Situational tasks contain a description of the clinical case in its entirety
Control work (module) – 40	0-23	24-30	31-35	36-40
Interval description	The algorithm for performing a practical skill is completed by 60% or less	The algorithm for performing a practical skill is completed by 60-76%	The algorithm for performing a practical skill is completed by 76-90%	The algorithm for performing a practical skill is completed by 90% or more

Conduct Policy: (lateness, absence, behavior in the auditorium, late submission of work).
- Punctuality and completion of tasks.
- Mandatory attendance of classes.
- Attending class in a clean medical uniform.
- Eliminating conversations on a cell phone in the classroom.
- Active participation in the learning process.
- Doing homework on time.
- Academic detention at the time specified by the teacher.

For violations of the Conduct Policy, the total points for discipline might be reduced to 1-10 points.

Academic Ethics Policy.
- Be tolerant, respect the opinions of others.
- Formulate objections in the correct form.
- Constructively support feedback in all classes.

- Plagiarism and other forms of dishonest work are unacceptable. Plagiarism includes the following: the absence of references when using printed and electronic materials, quotes, thoughts and works of other authors or students.
- Prompting and cheating during tests, exams, classes is unacceptable as well as passing an exam for another student, unauthorized copying of materials.

For violations of the Academic Ethics Policy, the total points for the discipline may be reduced to 1-10 points.

Guidelines for the lessons of the discipline

Key questions covered in lesson #1-2. Theme "Taking history and examination of children with upper and lower respiratory tract obstruction syndromes.".

1. collection of complaints
   - difficulties in nasal breathing; discharges character
   - Cough, it frequency, duration, painfulness; sputum presence and it character.
   - Voice changes: hoarseness, aphonia
   - Difficulties on breathing (dyspnea), its character
2. Anamnesis morbi(Onset, duration, frequency, severety, medications).
3. Anamnesis vitae.
4. Consciousness, position of child, his reaction on people around
5. Assessment of physical development.
6. Skin and visible mucous membrane color.
7. Nose breathing character, presence of discharges. Type of breathing.
8. Cough, sputum characteristics. Voice of child.
9. Thorax form and symmetry.
10. Rhythm, frequency and deepness of breathing .
11. Presence of chest(intercostal, breastbone) indrawing
12. BR/Pulse ratio:
13. State of pharynx, tonsil.
14. Palpation (superficial, deep). Chest elasticity and resistance. Painfulness. Vocal fremitus.
15. Symmetry of chest. Subcutaneous fat thickness.
16. Comparative percussion. Symmetry of percussion sounds.
17. Topography percussion. Determination of width of Crenig's area, apex of lungs, lower margins, excursion of lungs.
18. Auscultation. Symmetry of auscultative areas. Peculiarities of auscultation sounds of children due to their age.
19. Presence of abnormal sounds (rales, crackles, wheezing, crepitation, pleural friction rub).
20. chest x-ray,
21. bronchoscopy,
22. spirograph (respiratory rate (RR), tidal volume (TV), respiratory minute volume (RV), vital capacity of the lungs (VC), expiratory reserve volume (ERV) e.t.
23. peak flowmetry (peak expiratory flow rate),
24. sputum examination (Charcot-Leiden crystals, Kurshman's spirals, elastic fibers, bacteriological investigation).
25. Interpretation of laboratory test's results (CBC, biochemical blood tests).

<u>Independent work of students for</u> lesson #1-2:

Student should prepare notes for these topics:

- The most frequent complaints in case of damage to the respiratory system.
- Semiotics of changes in the frequency, depth, rhythm of breathing, the ratio of inhalation and exhalation in children.
- Forms of shortness of breath, their clinical signs.
- Syndromes of damage to different levels of the respiratory system: upper respiratory tract (nasopharyngitis, laryngitis)
- Syndromes of lesions of the middle respiratory tract (tracheitis, bronchitis)
- Syndromes of damage to the lower respiratory tract of the respiratory tract (bronchiolitis, pneumonia).
- Respiratory obstruction syndrome and its causes.
- Respiratory failure syndrome, severity.
- Features of palpation and percussion of the chest in children.
- Comparative and topographic percussion.
- Semiotics of changes in percussion sound in diseases in children.
- Features of auscultation in children.
- Pathological changes in respiratory sounds in children, their causes.
- Causes of wheezing in respiratory diseases in children, their classification and characteristics.
- Crepitus, pleural friction rub.
- The concept of bronchophony.

Recommended reading for lesson #1:

1. OP Ghai Essential pediatrics. 9-edition. P. 371; 374;

2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics, obstetrics &gynecology. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P. 73-89.
4. Pediatric respiratory examination. OSCE Guide. *https://geekymedics.com/paediatric-respiratory-examination-osce-guide/*
5. Pediatric Clinical Examinations - The Respiratory System
https://www.youtube.com/watch?v=rKgbIEPYqQ8

Key questions covered in lesson #3-4. Theme "Taking history, examination and diagnosis of children with congenital heart defects (CHD)".

1. Collection of comlaints:
   - Cardiac pain (Character of pain. Time of appearance. Connection of pain with position of patient. Irradiation of pain. Changes of pain after using of medicines).
   - Cardiac dyspnea.
   - Perceptible heartbeating (palpitation).
   - Paleness, cyanosis of skin.
   - Edema.
   - Pain in big or in small joints.
   - Complaints during increasing/decreasing of blood pressure
   - Suddenly cry, anxiety of baby
2. Anamnesis morbi:
   - When disease started?
   - What was clinical signs of disease? When appeared other symptoms of disease?
   - Which treatment child had before?
   - Which medicine was effective and how long was duration course of treatment?
   - What was the result of main investigations?
3. Anamnesis vitae:
   - Obstetric anamnesis
   - Infectious anamnesis
   - Allergic anamnesis
   - Hereditary predisposition
   - Social-living predisposition
4. Consciousness, expression of face.
1. Assessment of physical development.
2. Position of patient.
3. Skin color (cyanosis, pallor), rashes (ARF)
4. Edema
5. Dyspnea, shortness of breath.
6. Palpation (pulse rate, blood pressure, location of apex beat).
7. Percussion (The borders of relative heart dullness and transverse size of heart).
8. Percussion (The borders of absolute heart dullness and transverse size of heart).
9. Auscultation points of heart.
10. Auscultation. Heart murmurs (physiologic, pathologic murmurs). Characteristics of murmurs (timing, shape, location, radiation, intensity, pitch and quality).
11. CBC, biochemical blood test.
12. Electrocardiogram (ECG)
13. Chest X-ray, CT-scan
14. Echocardiography (ultrasoundgraphy)
15. Doppler Echocardiography
16. Heart magnetic resonance imaging (MRI)
17. Transesophageal echocardiography (TEE)
18. Cardiac catheterization
19. Coronary angiography
20. Exercise stress testing

<u>Independent work of students for lesson #3-4:</u>
Student should prepare notes for these topics:

- Anatomic-physiological peculiarities of cardiovascular system in children. Semiotics of congenital and acquired diseases of heart in children.
- Features of history taking in children with cardiovascular pathologies.

- Taking history of child with anemia, hemorrhage, hemolytic syndromes.
- Frequent symptoms in cardiovascular pathologies in children.

Recommended reading for lesson #3-4:

1. OP Ghai Essential pediatrics. 9-edition. P. 371; 374;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics, obstetrics &gynecology. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.63-65
4. USMLE Step 1: Heart Murmurs https://www.youtube.com/watch?v=NzsmDZe3HuQ
5. A Clinical Approach to Pediatric Heart Murmurs https://www.youtube.com/watch?v=qwv81el1WJ4
6. Heart Murmurs: Normal heart Sounds https://www.youtube.com/watch?v=v0jQJ448YxA&t=76s
7. Interpretation of results CBC, hemostasis "Complete Blood Count Normal Pediatric Values" http://a1.mayomedicallaboratories.com/webjc/attachments/110/30a2131-complete-blood-count-normal-pediatric-values.pdf
8. **https://www.childrensmn.org/references/lab/hematology/cbc-reference-value-table.pdf**

Key questions covered in lesson #5-6. Theme "Taking history and examination of children with anemia. Interpretation of the results of laboratory and instrumental research methods for anemia".

- Collection of complaints:
- Anamnesis Morbi
- Anamnesis vitae
- Assessment of development
- Physiology of the hematopoietic system.
- Normal parameters of the blood cells
- Acquired and hereditary anemia
- Types of anemia
- The main reasons for the development of iron-deficiency conditions and anemia in children.
- Pathogenesis of iron-deficiency anemia.
- Clinical manifestations and main syndromes of iron deficiency conditions and anemia: nervous system, epithelial, cardiovascular, muscular and secondary immunodeficiency syndromes.
- CBC, biochemical blood test: interpretation of the basic indexes of "red blood": the quality and quantity of Erythrocytes, Hemoglobin, Hematocrit and Color Index.

Recommended reading for lesson #5-6:

- Alekseev.V ., Starodubetz.U ., Isakova F.Introduction to Pediatrics: Compendium for foreign student
- O.P. Ghai. Essential Pediatrics- 6th Edition 2004 y.
- Nelson. Essentials of Pediatrics / Richard E. Berhman, Robert M. Kliegman – 4th ed.2002
- Case Based Pediatrics For Medical Students and Residents/ Department of Pediatrics, University of Hawaii John A. Burns School of Medicine, 2003
- Glader BE. Hemolytic anemia in children. *Clin Lab Med*. Mar 1999;19(1):87-111, vi. [Medline].
- Palek J, Jarolim P. Hereditary spherocytosis, elliptocytosis, and related disorders. In: Beutler E, Lichtman MA, Coller BS, Kipps TJ, eds. *Williams Hematology*. 5th ed. New York, NY: McGraw Hill; 1995:557-63
- Coller BS, Schneiderman PI. Clinical evaluation of hemorrhagic disorders: the bleeding history and differential diagnosis of purpura. In: Hoffman R, Benz EJ Jr., Shattil SJ, et al, eds. *Hoffman Hematology: Basic Principles and Practice*. 5th ed. Philadelphia, Pa: Churchill Livingstone Elsevier; 2008:chap 121.
- Kessler C. Hemorrhagic disorders: Coagulation factor deficiencies. In: Goldman L, Ausiello D, eds. *Cecil Medicine*. 23rd ed. Philadelphia, Pa: Saunders Elsevier;2007:chap 180.
- Schwartz RS. Autoimmune and intravascular hemolytic anemias. In: Goldman L, Schafer AI, eds. *Cecil Medicine*. 24th ed. Philadelphia, Pa: Saunders Elsevier; 2011: chap 163.

Key questions covered in lesson #7-8. Theme "Taking history, examination and diagnosis of children with bleeding".

- Collection of complaints:
- Anamnesis Morbi
- Anamnesis vitae
- Assessment of skin
- Assessment of development
- Physiology of the hematopoietic system.
- Coagulation factors
- Coagulopathy

- Normal parameters of the blood cells
- To describe the clinical features of Hemophilia
- The approach to diagnosis of Hemophilia
- To describe the clinical features of Hemorrhagic vasculitis
- The approach to diagnosis of hemorrhagic vasculitis
- CBC, biochemical blood test:

Recommended reading for lesson #7-8:

- Alekseev.V ., Starodubetz.U ., Isakova F.Introduction to Pediatrics: Compendium for foreign student
- O.P. Ghai. Essential Pediatrics- 6th Edition 2004 y.
- Nelson. Essentials of Pediatrics / Richard E. Berhman, Robert M. Kliegman – 4th ed.2002
- Case Based Pediatrics For Medical Students and Residents/ Department of Pediatrics, University of Hawaii John A. Burns School of Medicine, 2003
- Glader BE. Hemolytic anemia in children. *Clin Lab Med*. Mar 1999;19(1):87-111, vi. [Medline].
- Palek J, Jarolim P. Hereditary spherocytosis, elliptocytosis, and related disorders. In: Beutler E, Lichtman MA, Coller BS, Kipps TJ, eds. *Williams Hematology*. 5th ed. New York, NY: McGraw Hill; 1995:557-63
- Coller BS, Schneiderman PI. Clinical evaluation of hemorrhagic disorders: the bleeding history and differential diagnosis of purpura. In: Hoffman R, Benz EJ Jr., Shattil SJ, et al, eds. *Hoffman Hematology: Basic Principles and Practice*. 5th ed. Philadelphia, Pa: Churchill Livingstone Elsevier; 2008:chap 121.
- Kessler C. Hemorrhagic disorders: Coagulation factor deficiencies. In: Goldman L, Ausiello D, eds. *Cecil Medicine*. 23rd ed. Philadelphia, Pa: Saunders Elsevier;2007:chap 180.
- Schwartz RS. Autoimmune and intravascular hemolytic anemias. In: Goldman L, Schafer AI, eds. *Cecil Medicine*. 24th ed. Philadelphia, Pa: Saunders Elsevier; 2011: chap 163.

Key questions covered in lesson #9. Theme "Taking history, examination and diagnosis of children with GERD and gastritis".

1. Abdominal pain, characteristics (time of appearance, duration, frequency, localization, connection with food intake and its nature, connection with physical, emotional stress and other factors).
2. Dyspepsia (belching, nausea, heartburn, vomiting, regurgitation).
3. The main causative factors of acute gastritis in childhood. Clinical manifestations, diagnosis and treatment of acute gastritis and duodenitis in children.
4. Helicobacter pylori-associated gastritis in children. Clinical picture of the H.pylori gastritis, course of disease, endoscopic parameters. Methods of detecting H. pylori infection
5. GERD causes, clinical signs, diagnosis.

Independent work of students for lesson #9:

Student should prepare notes for these topics:

- Features of taking history according to main pathological signs and make conclusion of Syndrome: GASTRITIS, DUODENITIS, GERD, Gastrointestinal bleeding in children.
- Frequent symptoms in children with gastrointestinal pathologies.

Recommended reading for lesson #9:

1. OP Ghai Essential pediatrics. 9-edition. P. 371; 374;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.
4. ABDOMINAL EXAMINATION – OSCE GUIDE https://geekymedics.com/abdominal-examination/ Posted by Dr Lewis Potter | Clinical examination, Gastro |
5. Pervez Akber Khan "Basis of Pediatrics" 2000 7th -E d _p.270-300
6. Abdominal examination: https://www.youtube.com/watch?v=1Xc7RYkz-CE
7. Case Based Pediatrics For Medical Students and Residents/ Department of Pediatrics, University of Hawaii John A. Burns School of Medicine, 2003
8. http://emedicine.medscape.com
9. http://medline.com
10. www.aap.org

Key questions covered in lesson #10. Theme "Taking history, examination and diagnosis of children with enterocolitis".

1. Assessment of body habitus.
2. Presence of scars, rashes.

3. Skin color (jaundice, pallor).
4. Inspection of oral cavity (tongue, angular stomatitis, mouth ulcers, presence of rashes, tongue cover)
5. Observe abdomen from a distance (Size, shape and contour; note any distension or asymmetry, peristaltic waves, Visible masses). Presence of caput medusa, stomas, striae.
6. Determination of clinical signs of pathological syndromes.
7. Palpation of lymph nodes in children.
8. Light palpation (assess tenderness, guarding, superficial masses).
9. Deep palpation (Feel for organs (liver, spleen, bladder and kidneys). Assess for rebound tenderness. Determination of shape, consistency, mobility of GIT organs.
10. Determination of pathologic signs by palpation (Murphy's sign, Phrenicus sign, Boasa's sign, Openkhovsky's sign).
11. Features of percussion in children.
12. Percussion of the borders of the liver and measurement of its size according to Kurlov.
13. Determination of pathologic signs by percussion (Ortner-Grekov's sign, Mendel's sign).
14. Determination of presence of fluid in the abdominal cavity by palpation and percussion.
15. Determination of "splashing noise" by mixed method (auscultation and percussion).

Independent work of students for lesson #10:

Student should prepare notes for these topics:

- Inspection of child with Acute abdominal pain.
- Method of light abdominal palpation in children.
- Method of deep abdominal palpation in children.
- Palpation and percussion of liver.
- Palpation and percussion of spleen.
- Evaluation of Portal hypertension.

Recommended reading for lesson #10:

1. OP Ghai Essential pediatrics. 9-edition. P. 278-300;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics, obstetrics &gynecology. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.69-71
4. ABDOMINAL EXAMINATION – OSCE GUIDE https://geekymedics.com/abdominal-examination/ Posted by Dr Lewis Potter | Clinical examination, Gastro |
5. Pervez Akber Khan "Basis of Pediatrics" 2000 7th -E d _p.270-300
6. Abdominal examination: https://www.youtube.com/watch?v=1Xc7RYkz-CE

Key questions covered in lesson #11-12. Theme "Taking history, examination and diagnosis of children with hepatitis".

1. Classification of hepatitis.
2. Hepatitis A, B,C,D,E.
3. Assessment of skin color, examination of liver.
4. Etiology
5. Clinical signs
6. Measure hemoglobin level
7. Urinalysis.
8. White blood cell (WBC) count and liver function tests (LFTs) (AST, ALT, bilirubin and alkaline phosphate levels)

Independent work of students for lesson #11-12:

Student should prepare notes for these topics:

- Normative indices of bilirubin and its fractions, ALT, AST, alkaline phosphatase, amylase.
- Methodology and evaluation of STOOL TEST: COPROLOGY, Occult blood test
- Normal and pathology of Biochemistry test: albumin, serum protein, BUN
- CBC, CRP
- Indication to MRI, PET, CT
- Indication to Angiography abdominal vessels

Recommended reading for lesson #11-12:

1. OP Ghai Essential pediatrics. 9-edition. P. 278-300;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.69-71
4. ABDOMINAL EXAMINATION – OSCE GUIDE https://geekymedics.com/abdominal-examination/ Posted by Dr Lewis Potter | Clinical examination, Gastro |
5. Pervez Akber Khan "Basis of Pediatrics" 2000 7th -E d _p.270-300

Key questions covered in lesson #13-14 "Taking history, examination and diagnosis of children with biliary dyskinesia".

- Anatomical and physiological features of the biliary system in children.
- The bile: composition, properties and functions.
- Biliary dyskinesia. Definition and clinical manifestation. Predisposing factors. Types of dyskinesia and methods of their correction.
- The cholecystitis in children. Etiology and pathogenesis of cholecystitis. Acute and chronic cholecystitis.
- Chronic calculous cholecystitis: causes, clinical manifestation.
- Mechanisms of stone formation. The role of hemolysis and congenital metabolic disorders in the gallstone formation. Types of gallstones.
- Diagnostic methods of gallbladder diseases and bile ducts disorders in children.
- The management of gallbladder diseases and bile ducts disorders in children. Correction of eating habits and dietary recommendations.
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Key questions covered in lesson #15-16. Theme "Taking history, examination and diagnosis of children with upper urinary tract infection".

By anamnesis collection necessary to pay attention:

1. Frequency of complains: the pain in the abdomen, characteristic of pain on localization, time of appearing, duration, intensity, changes of the skin coloration, appetite's lessening.
2. Dates of (symptom's) appearance.
3. What does precede to the present disease?
4. If disease is chronically, curing of the precede exacerbations, degree of recovery.
5. Presence in the family and of nearest relations diseases of this system.
6. Has the child lagging in a physical development?

Independent work of students for lesson #15-16:

Student should prepare notes for these topics:

- Features of history taking in children with urogenital pathologies.
- Definition and principles of diagnostics of URINARY syndrome
- Definition and principles of diagnostics of UTI (URINE TRACT INFECTION)
- Definition of polyuria, pollakyuria, anuria, oligouria, disuria

Recommended reading for lesson #15-16:

1. OP Ghai Essential pediatrics. 9-edition. P. 464-500;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics, obstetrics &gynecology. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.80-81
4. Pervez Akber Khan "Basis of Pediatrics" 2000 7th -E d _p.512-530

Key questions covered in lesson #17. Theme "Taking history, examination and diagnosis of children with lower urinary tract infection".

1. Child's position on the bed consciousness, reaction to the examine.
2. Physical development, the state of nourishment and build.
3. Skin's coloration and mucous membranes.
4. Presence of the face's edemas and general edema. The form and size of the abdomen.
5. Lumbar field (edema, hyperemia of the skin).
6. Inspection and the evaluation of BLOOD PRESSURE (Systolic diastolic BP) in children according of percentile.
7. State of the external genitals.
8. Inspection and evaluation of SMR.
9. Features of palpation of kidneys in children.
10. Determination of edema by palpation.
11. Determination of the presence of free fluid in abdominal cavity and upper bladder border by percussion.

Independent work of students for lesson #17:

Student should prepare notes for these topics:

- Methods of abdominal palpation superficial and deep.
- Methods of kidney palpation.
- Palpation urinary bladder.
- Inspection of skin and adipose tissue
- Measurement of Blood pressure
- Inspection and the evaluation of BLOOD PRESSURE (Systolic diastolic BP) in children according of percentile

- Measurement of Pulse rate, Breathing rate
- Inspection and evaluation of BREATHING RATE ACORDING AGE.
- Inspection and evaluation of PULSE RATE ACCORDING TO AGE
- Anthropometric measurements – weight, height, arm span, https://www.youtube.com/watch?v=qeyXvCOIMHc
- Inspection and evaluation of SMR.
- Inspection and evaluation of Stature according simplified tables: height-for-Age, Length-for-Age, BMI-for-Age, Stature-for-Age
- Inspection and evaluation of edema.

Recommended reading for lesson #17:

1. OP Ghai Essential pediatrics. 9-edition. P. 464-500;
2. Nelson. Textbook of pediatrics. 21 editions.
3. IHSM. Department of pediatrics, obstetrics &gynecology. Introduction to pediatrics. (compendium for foreign student). Bishkek – 2012. P.80-81
4. Pervez Akber Khan "Basis of Pediatrics" 2000 7th -E d _p.512-530

https://www.researchgate.net/publication/256823054_Pediatric_urine_testing

Methodological instructions for the implementation of independent work on the discipline

Each Student have to perform a clinical case/presentation/essay.

Requirements for the implementation of the clinical case/ presentation/essay:

- ✓ Given by electronic and printed form / short notes,
- ✓ Typed in Times New Roman 12, 1.5 interval
- ✓ The first page should contain the full name of the student, group, semester, the name of the abstract, the data of teacher, the filing date of the abstract.
- ✓ Contain parts: introduction, main part, findings / conclusions, list of references, litearature.
- ✓ The total essay 6 - 7 pages.

TOPICS OF INDEPENDENT WORK FOR STUDENTS:

1. Pericarditis
2. Myocarditis
3. Endocarditis
4. Congenital heart defects
5. Croup syndrome
6. Bronchial obstructive syndrome
7. Syndrome of jaundice
8. Syndrome of portal hypertension
9. Nephrotic syndrome
10. Nephritic syndrome
11. UTI