INTERNATIONAL HIGHER SCHOOL OF MEDICINE

Department of Pediatrics

SYLLABUS

Discipline Propedpediatrics

2026-2027 academic year
for students of medical faculty
2 course III semester, groups 1-9-1-24
2 credits (60h, including auditorial 36 h, independent work – 24 h)

Lecturer:	Najimidiniva Gulmira +996700160061 (Whatsapp) Email: **nt_gulmira@mail.ru** Welfare Children's City Hosptal 3
Venue:	Zoom
Practical classes:	Isakova Feruza +996707932178 phone (Whatsapp) **Email: isakova.feruza.b@mail.ru** Djuraeva Barchinay +996551557203 Email: Binaibinai.24.09@gmail.com
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The Syllabus is considered
at the meeting of the department of Pediatrics
Protocol №__1___dated___26/08/ 2025
Head of the department_____

Bishkek

Content

Course Objective 2
Recommended reading for the discipline 4
Grading policy 4
Conduct Policy 5
Academic Ethics Policy 5
Guidelines for the lessons of the discipline 5
Lesson 1. Growth periods, 2h 5
Lesson 2. Taking history, 2h 5
Lesson 3. Body measurement, 2h 6
Lesson 4. Growth indicators, 2h 6
Lesson 5. Development of a child 6
Lesson 6. Monitoring a child development, 2h 6
Lesson 7. Module of Unit 1 7
Lesson 8. Breastfeeding, 2h 7
Lesson 9. Complementary feeding, 2h 7
Lesson 10. Alternative (replacement feeding), 2h 8
Lesson 11. Nutrition of Preschool and school age child, 2h 8
Lesson 12. Module of Unit 2 8
Instructions for the implementation of self-independent work 8
SIW of unit 1 8
SIW of unit 2 8

Course Objective:
The purpose of the discipline is to acquire knowledge of the age-related characteristics of a growing child's body and the fundamentals of pediatric dietetics, basic skills and abilities in assessing physical and psychomotor development, and examining a healthy and sick child.

After study of the discipline the student must:

Knowledge:
• Basic ethical and deontological principles of work of medical staff;
• A medical history outline defining the sequence of patient examinations using physical, clinical, laboratory, functional, and instrumental methods.

Skill:
• Explain the basic ethical and deontological principles of healthcare professionals;
• Properly conduct anthropometric examinations of children and analyze the results;
• Identify the most common problems in infant feeding and the nutrition of young children and schoolchildren

Attitude:
• Demonstrate interviewing skills to collect complaints, life history and illness of the child;
• Skills in anthropometry and physical examination of patients aimed at identifying growth and developmental disorders;
• Skills in assessing correct breastfeeding;
• Skills of communication with the patient in compliance with ethical and deontological principles of work

Pre-requisites:
- Anatomy
- Normal physiology
- Biochemistry

Post-requisites:
- Childhood diseases
- Children's infectious diseases
- Pediatric surgery
- Medical genetics

THEMATIC PLAN OF LECTURES

№	Theme of lecture	Hours	Date
	Unit1 A child Growth and development		
1.	Periods of Growth	2	
2.	Growth indicators	2	
3.	Development	2	
	Unit2 A Child Nutrition		
4.	Breastfeeding. Complementary feeding	2	
5.	Alternative (replacement feeding)	2	
6.	Nutrition for Preschool and school age child	2	
	Total	**12**	

THEMATIC PLAN OF PRACTICAL CLASSES

№	Theme of practical class	Hours	Date
	Unit1 A child Growth and development		
1	Growth periods.	2	
2	Taking history	2	
3	Body measurement	2	
4	Growth indicators	2	
5	Development of a child	2	
6	Monitoring a child development	2	
7	Module1	2	
	Unit2 A Child Nutrition		
8	Breastfeeding	2	
9	Complementary feeding	2	
10	Alternative (replacement feeding)	2	
11	Nutrition of Preschool and school age child	2	
12	Module 2	2	
	Total	**24**	

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

№	Theme of independent work	Hours	Date
Unit 1	Reading	8	
	Solving a case of assessment the growth and development of a child	4	Module 1
Unit 2	Reading	8	
	Preparation of abstracts and its presentation by one of the proposed topics:	4	Module 2
	– The structure and functioning of human milk bank		
	– Anatomy of the mammary gland and physiology of lactation hormones		
	– Supplementation of foods for preschool and school-age children		
	– Plan an appropriate diet for healthy preschooler		
	– Plan an appropriate diet for healthy teenager (10-12 years)		
	– Harvard plate for planning healthy nutrition		
	Total	**24**	

Recommended reading for the discipline:

Basic literature

№	Author	Title	The year of publishing
1	Ghai O.P., Paul V.K, Bagga A.	Essential Pediatrics. 9th ed.	2019
2	Ghai O.P., Paul V.K, Bagga A.	Essential Pediatrics. 8th ed.	2013
3	Alekseev.V. Starodubetz.U., Isakova F.	Introduction to Pediatrics: Compendium for foreign student	2012
4	Rafikova S., Alekseev V.	Children`s Nutritional Abnormalities	2013
5	Kliegman R.M., Geme III J.W.	Nelson textbook of pediatrics.Vol.1.-21th ed.	2020
6	Kliegman R.M., Geme III J.W.	Nelson Textbook of Pediatrics. Vol.2. 21st ed.	2020
7	Pervez Akbar Khan	Basis of pediatrics 10th ed	2020

Additional literature

№	Author	Title	
7.	David S. Rosen	Physiologic Growth and Development during Adolescence 2004	https://doi.org/10.1542/pir.25-6-194
8.	UNICEF, WHO	Infant and young child feeding counselling: an integrated course: participant's manual, 2nd ed 2021	https://www.who.int/publications/i/item/9789240032408
9.	WHO	Pocket book of primary health care for children and adolescents: guidelines for health promotion, disease prevention and management from the newborn period to adolescence 2022	https://www.who.int/europe/publications/i/item/9789289057622

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

Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control - 40	**0-23**	**24-30**	**31-35**	**36-40**
Interval Criteria	The student does not complete assignments, has significant gaps in the assimilation of theoretical material, has difficulty applying knowledge in solving situational problems and test questions; does not answer simple questions accurately and has poor practical skills	The student Completes assignments incompletely, has gaps in understanding theoretical material, has difficulty applying knowledge to solve situational problems and test questions, and answers the teacher's questions incompletely and inaccurately. Has a superficial command of practical skills.	The student fully completes the assignment, knows the theoretical material, but sometimes makes minor errors when solving situational problems and test questions. They have a good understanding of the theoretical material and provide correct and complete answers to questions. They have a good command of practical skills, with minor inaccuracies.	The student fully and independently completes assignments, easily applies knowledge and skills to solving situational problems and test questions, rarely makes minor errors, and provides complete and accurate answers to questions. Has a full command of practical skills.

Independent work - 20	**0-11**	**12-14**	**15-17**	**18-20**
Interval Criteria	The independent work assignment has not been completed or only individual sections have been completed.	The content of the completed independent work partially corresponds to the assigned topic, the main material is presented superficially, the work is done sloppily	The content of the completed independent work corresponds to the given topic, the theoretical material is presented well, there are minor errors, the work is done carefully.	The content of the completed independent work deeply and fully covers the given topic, the work is completed carefully, and meets the requirements of publications
Line control (module) - 40	**0-23**	**24-30**	**31-35**	**36-40**
Interval Criteria	The student answered less than 50% of the given test questions correctly.	The student correctly answered 50-75% of the given test questions.	The student correctly answered 76-89% of the given test questions.	The student correctly answered more than 90% of the assigned test questions.

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 lessons of **Unit1 – A Child Growth and Development.**

Lesson 1. Growth periods, 2h
1. Definition of Pediatrics.
2. Intrauterine period IUP, the embryopathy and fetopathy.
3. Age groups in childhood.

After lesson Student must be able to

- ✓ Define the terminologies Growth and development
- ✓ Discuss the factors affecting normal growth and development

Recommended reading for this lesson:
[1], [3], [5], [7]

Lesson 2. Taking history, 2h
1. Components of pediatric History.
2. Steps of taking history and family interview.
3. ABCD-approach in communication doctor – patient:
   - «Accepting»
   - «Broadening»,
   - «Clarifying»,

– «Deepening».

Homework (write in copybook):

A. Write 3 “open” and 3 “close” questions for History of Present Illness of 2 years old child with fever and cough,
B. Write 3 “open” and 3 “close” questions for Past Medical history of 3 years old child with failure to thrive

After lesson Student must be able to

- ✓ Define components of pediatric history
- ✓ Describe approaches in communication doctor – patient
- ✓ Elicit history of illness and life history of a child

Recommended reading for this lesson:
[1], [3], [5], [7]

Lesson 3. Body measurement, 2h

1. The parameters used for assessment of physical growth in infants, children and adolescents
2. Clinical manifestation and treatment the patient with marasmus and kwashiorkor
3. Anthropometric measurements of children of different ages:
   - body weight
   - body length and height
   - the head and chest circumference
   - waist, hip, mid-arm circumference

After lesson Student must be able to

- ✓ Enumerate the parameters used for assessment of physical growth in infants, children and adolescents
- ✓ Perform Anthropometric measurements, document in growth charts and interpret.

Recommended reading for this lesson:
[1], [3], [5], [7]

Lesson 4. Growth indicators, 2h

1. Growth indicators:
   - Length/height-for-age
   - Weight-for-age
   - Weight-for-length/height
   - BMI (body mass index)
2. Common problems related to Growth: a child who fails to thrive, a child with short stature, an obese child.

After lesson Student must be able to

- ✓ Describe the methods of assessment of growth including use of WHO standards.
- ✓ Calculate BMI, waist hip ratio and interpret,
- ✓ Perform document in growth charts and interpret.

Recommended reading for this lesson:
[1], [3], [5], [9]

Lesson 5. Development of a child

1. Laws of growth and development
2. Factors affect to Development
3. Brain development
4. Types of Developmental Milestones
   - Gross motor milestones
   - Fine motor milestones
   - Social emotional milestones
   - Communication milestones

Homework (write in copybook):

A. Milestones of a child motor development: Gross motor and fine motor development of 0 – 6 months, 7 – 12 months, 13 – 24 months, 25 – 36 months of age
B. Milestones of a child Language, Social, adaptive development of 0 – 6 months, 7 – 12 months, 13 – 24 months, 25 – 36 months of age

After lesson Student must be able to

- ✓ Define development
- ✓ Discuss the factors affecting development and describe the assessment methods of development.
- ✓ Describe the normal developmental milestones with respect to motor, behaviour, social, adaptive and language.

Recommended reading for this lesson:
[1], [3], [5], [7], [9]

Lesson 6. Monitoring a child development, 2h

1. Assessment of development
2. Developmental delay
3. The causes of developmental delay and disability including intellectual disability in children

After lesson Student must be able to

- ✓ Define developmental delay.
- ✓ Describe the causes of developmental delay and disability including intellectual disability in children
- ✓ Discuss the approach to a child with developmental delay

Recommended reading for this lesson:
[1], [3], [5], [7], [9]

Lesson 7. Module of Unit 1.

1. Characteristics of Neonatal period – duration, child's growth, activity and developmental milestones
2. Characteristics of early childhood (toddler) period – duration, child's growth, activity and developmental milestones
3. Characteristics of preschool period – duration, child's growth, activity and developmental milestones
4. Characteristics of school period – duration, child's growth, activity and developmental milestones
5. Presentation of **a case of assessment the growth and development of a child** (SIW)

Recommended reading for this lesson:
[1], [3], [5], [7], [9]

Key questions covered in lessons of **Unit 2 – A Child Nutrition.**

Lesson 8. Breastfeeding, 2h

1. "10 steps to successful breast-feeding" policy.
2. Breast milk composition of nutrients.
3. Anatomy of women breast in lactation.
4. Lactation physiology: prolactin reflex, inhibiting and stimulating factors.
5. Lactation physiology: oxytocin reflex, inhibiting and stimulating factors.
6. Assessment of breast feeding technic:
   - Correct position of mother and baby,
   - Correct attachment,
   - Signs of effective suckling.
7. Breast feeding problems: breast engorgement, breast abscess, inverted nipple, sore nipple.

Homework (write in copybook):

A. Definition of exclusive breastfeeding, mainly (predominately) breastfeeding, partial breastfeeding and etc.
B. Composition and types of breast milk: colostrum, transitional milk, mature milk, immature milk, fore milk, hind milk.
C. Breastfeeding advantages for a child, for a mother

After lesson Student must be able to

- ✓ Aware on the practices of breastfeeding and explain physiology of lactation
- ✓ Describe the composition and types of breast milk
- ✓ Describe the advantages of breast milk
- ✓ Observe the correct technique of breastfeeding and distinguish right from wrong techniques

Recommended reading for this lesson:
[1], [3], [5], [8], [9]

Lesson 9. Complementary feeding, 2h

1. Definition the Complementary feeding.
1. Risks to starting complementary feeding too early
2. Risks to starting complementary feeding too late
3. Stages and order of giving complementary food on the first year of life.
4. Foods for energy gap (staple food)
5. Foods to fill Iron and vitamin A gaps.
6. Foods and types of meals for Complementary Feeding of infants in your country (in India / Pakistan). Value and quality of these products.

After lesson Student must be able to

- ✓ Define the term Complementary Feeding
- ✓ Explain the principles, the initiation, attributes, frequency, techniques and hygiene related to Complementary Feeding.
- ✓ Enumerate the common complementary foods
- ✓ Elicit history on the Complementary Feeding habits
- ✓ Counsel and educate mothers on the best practices in Complimentary Feeding

Recommended reading for this lesson:
[1], [3], [5], [8], [9]

Lesson 10. Alternative (replacement feeding), 2h

1. Definition of replacement feeding.
2. Contraindications to breastfeeding related with maternal and child problem
3. Comparative characteristics of breast milk, animal milk and formula in calories, protein, lipids and carbohydrates.
4. Breast-milk substitutes. Characteristics (negative and positive) of commercial infant formula
5. The problems of replacement feeding: sensitization, asthma, eczema, mineralization failure, dehydration, constipation, diarrhea, vomiting, caries, obesity, septic conditions.
6. The amount of replacement food in different age of infant

After lesson Student must be able to

- ✓ Discuss the differences between cow's milk and Human milk
- ✓ Describe the age related nutritional needs of infants, children and adolescents including micronutrients and vitamins
- ✓ Describe the tools and methods for assessment and classification of nutritional status of infants, children and adolescents

Recommended reading for this lesson:
[1], [3], [6], [8], [9]

Lesson 11. Nutrition of Preschool and school age child, 2h

1. Normal nutrition, age-specific nutritional needs.
2. The age-related calorie requirement.
3. The balanced meals for preschool and school-age children.
4. Common nutritional problems.
5. Micronutrients in Health and Diseases:
   - Fat-soluble vitamins (Vit A, Vit D, Vit E, Vit K)
   - Water-soluble vitamins (Vit B1, Vit B2, Vit B3, Vit B6, Vit 12, Folic acid, Vit C)
   - Minerals (Calcium, Magnesium)
   - Trace elements (Zinc, Copper, Selenium, Chromium, Iodine, Iron)

After lesson Student must be able to

- ✓ Describe the age related nutritional needs of infants, children and adolescents including micronutrients and vitamins
- ✓ Describe the tools and methods for assessment and classification of nutritional status of infants, children and adolescents
- ✓ Explains the Calorific value of common Indian foods
- ✓ Elicit document and present an appropriate nutritional history and perform a dietary recall
- ✓ Calculate the age-related calorie requirement in Health and Disease and identify gap
- ✓ Assess and classify the nutrition status of infants, children and adolescents and recognize deviations
- ✓ Plan an appropriate diet in health and disease

Recommended reading for this lesson:
[1], [3], [4], [6], [8], [9]

Lesson 12. Module of Unit 2

1. Assessment the practices of breastfeeding
2. Assessment the correct technique of breastfeeding
3. Assessment the practices of Complementary feeding
4. Assessment the practices of replacement feeding
5. Assessment the nutrition status of infants, children and adolescents and recognition deviations
6. Presentation an abstract (ppt) about a child nutrition (SIW)

Recommended reading for this lesson:
[1], [3], [4], [6], [8], [9]

Instructions for the implementation of self-independent work

SIW of unit 1

During the Unit 1, student presents the Case of Assessment Child's Growth and Development with documenting in growth charts and interpretation given anthropometric parameters.
The SIW is assessed with a maximum of 20 points according to Grading criteria for independent work.

SIW of unit 2

During the Unit 2, student make presentation or a poster by 1 of the chosen topics (the demonstration time is 5-7 minutes, 10 to 12 slides).

Unit 2	Preparation of abstracts and its presentation by one of the proposed topics:	4	Module 2
1)	The structure and functioning of human milk bank		
2)	Anatomy of the mammary gland and physiology of lactation hormones		
3)	Supplementation of foods for preschool and school-age children		
4)	Plan an appropriate diet for healthy preschooler		
5)	Plan an appropriate diet for healthy teenager (10-12 years)		
6)	Harvard plate for planning healthy nutrition		

The SIW is assessed with a maximum of 20 points: 5 - design, 5 - content, 8 – presentation, 2 – time keeping.
The first slide should include “IHSM”, “Department of pediatrics”, “the theme of presentation”, “the full name of the student”, group, semester, “the data of teacher”, the filing date, and the last slide - list of references, resources.

Владимир Алексеев