

INTERNATIONAL HIGHER SCHOOL OF MEDICINE

Syllabus Elective course Assessment nutritional status in children

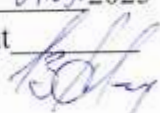
2025-2026 academic year
for students of medical faculty
5 course X semester, groups ____
1 credit (30 h, including lectures – 6 h., auditorial 12 h, independent work – 12h)

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Venue: Zoom

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Venue: National center of Maternity and childhood welfare

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

- Normal physiology
- Biochemistry

Postrequisites:

- Childhood diseases
- Children's infectious diseases
- Pediatric surgery
- Medical genetics
- Public Health

Thematic plan of lectures classes

#	Theme	Lectures (h)
1.	Causes of nutritional problems. Nutritional Assessment Methods and techniques	2
2.	Assessment nutritional status in children	2
3.	Types of nutritional problems. Malnutrition, thinness and growth faltering. Overweight and obesity. Short stature. Tall stature	2
	Total	6

Thematic plan of practice classes

#	Theme	Practice class (h)	Independent work (h)
4.	Causes of nutritional problems	2	2
5.	Nutritional Assessment Methods and techniques.	4	2
6.	Assessment nutritional status in children	2	2
7.	Types of nutritional problems. Malnutrition, thinness and growth faltering. Overweight and obesity. Short stature. Tall stature	2	2
8.	Module	2	4
	Total	12	12

Recommended reading for the discipline: Basic literature

№	Author	Title	The year of publishing	Publishing house	Availability in the IHSM library (number)
1	Vinod K Paul, Arvind Bagga	Essentials Pediatrics. - 9 th ed.	2019	978-93-87964-10-5	
2	Alekseev.V., Starodubetz.U., Isakova F.	Introduction to Pediatrics: Compendium for foreign student	2012	978-9967-26-670-4	342
3	Rafikova S., Alekseev V.	Children`s Nutritional Abnormalities	2013	978-9967-27-179-1	109

4	Behraman R.E.	Nelson essentials of pediatrics - 4 th ed.	2002	0-7216-9406-3	12
5	Ghai O.P., Paul V.K, Bagga A.	Essentials of pediatrics. -8th ed.	2013	978-81-239-2334-5	9
6	Kliegman R.M., Geme III J.W.	Nelson textbook of pediatrics.Vol.1.- 21th ed.	2020	9 996 128 296	50
7	WHO	Child growth standards	2008	978 92 4 159507 0	https://www.who.int/tools/child-growth-standards
8	Ronald E. Kleinman, MD, FAAP Editor Frank R. Greer, MD, FAAP Associate Editor	Pediatric nutrition handbook, ed 7, Elk Grove Village, IL, American Academy of Pediatrics.	2013	978-1-58110-819-4	https://www.vasiliadis-books.gr/Vasiliadis-books/wp-content/uploads/2015/06/PEDIATRIC-NUTRITION-LOOK-INSIDE.pdf

Recommended reading for discipline: Additional literature

№	Author	Title	The year of publishing	Publishing house	Availability in the IHSM library (number)
1	David S. Rosen	Physiologic Growth and Development during Adolescence	2004	Pediatrics in Review. 2004; 25:194-200	https://doi.org/10.1542/pir.25-6-194
2	WHO	Pocket book of Primary health care for children and adolescents	2022	978-92-890-5762-2	https://apps.who.int/iris/handle/10665/352485
3	WHO	Pocket book of hospital care for children	2013	978-9967-11-599-6	https://www.who.int/publications/i/item/978-92-4-154837-3
4	Jennifer J. Otten, Jennifer Pitzig, Hellwig, and Linda D. Meyer, Editors	Dietary Reference Intakes: The Essential Guide to Nutrient Requirements	2006	978-0-309-15742-1	https://nap.nationalacademies.org/catalog/11537/dietary-reference-intakes-the-essential-guide-to-nutrient-requirements

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)

Criteria for grading for the discipline				
Maximum score	Intervals			
	"unsuccessful."	"satisfying."	"Fine"	"Great"
Current control - 40	0-23	24-30	31-35	36-40
Interval Criteria	Does not complete the task, does not know and does not understand the lecture material of the lesson, which prevents further assimilation of the program; cannot apply the acquired knowledge to solving situational problems, test questions. Does not answer teacher's questions. Does not have practical skills when examining a patient	Performs the task not in full, has gaps in the assimilation of lecture material, has difficulty in applying knowledge to solving situational problems, test questions; 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, knows the lecture material, but sometimes makes mistakes when solving situational problems and test questions, understands the main content of the lecture material, 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 and test questions, 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 Criteria	Presentation, report, table, situational task are missing	The content of the presentation, report, tables partially correspond to the given topic, the sequence of presentation of theoretical issues is violated: etiology, pathogenesis, epidemiology, clinic, differential diagnosis, laboratory diagnosis, treatment and prevention. Situational tasks contain a little description of a clinical case	The content of the presentation, report, tables does not fully correspond to the given topic, the sequence of presentation of theoretical issues (etiology, pathogenesis, epidemiology, clinic, differential diagnosis, laboratory diagnosis, treatment and prevention) is not fully preserved. Situational tasks incompletely contain a description of a clinical case	The content of the presentation, report, tables correspond to the given topic, the sequence of presentation of theoretical issues (etiology, pathogenesis, epidemiology, clinic, differential diagnosis, laboratory diagnosis, treatment and prevention) is fully preserved. Situational tasks contain a description of the clinical case in its entirety
Line control (module) - 40	0-23	24-30	31-35	36-40
Interval Criteria	Does not know the answers to test questions and situational tasks	Poor knowledge of answers to test questions and situational tasks	Knows well the answers to test questions and situational tasks	Knows the answers to test questions and situational tasks

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 1-5 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 1-5 points.

Guidelines for the lessons of the discipline

Key questions covered in lesson #1. «Causes of nutritional problems»

- Factors affecting the nutritional status of the child
- Who is at risk for eating disorders
- Nutritional problems:
 - Digestion problems
 - Deficiency diseases
 - Skin disorders
 - Stunted or defective bone growth

Discuss on practice class:

1. COMMON DIGESTIVE DISORDERS INCLUDE:

- irritable bowel syndrome (IBS)
- small intestinal bacterial overgrowth (SIBO)
- gastroesophageal reflux disease (GERD)
- gallstones
- celiac disease
- Crohn's disease
- ulcerative colitis (UC)

2. DEFICIENCY DISEASES

- Protein energy deficiency (marasmus, kwashiorkor)
- Anemia (Iron deficiency anemia, B12 deficiency anemia, folic acid deficiency anemia)
- Iodine deficiency
- Vit A deficiency

3. Skin disorders relating with nutritional problems

HOMEWORK (written in copybook – etiology, pathogenesis, Clinical features, Lab investigations and treatment):

- Factors affecting the nutritional status in children
- *irritable bowel syndrome (IBS)*

- *small intestinal bacterial overgrowth (SIBO)*
- *gastroesophageal reflux disease (GERD)*
- *gallstones*
- *celiac disease*
- *Crohn's disease*
- *ulcerative colitis (UC)*

Recommended reading for this discipline:

1. Ghai OP Essential Pediatrics 9th Ed.
2. Nelson textbook of pediatrics, 21st ed.
3. Pocket book of Primary health care for children and adolescents. WHO.2022.
<https://apps.who.int/iris/handle/10665/352485>
4. Pocket book of hospital care for children. WHO. 2013
<https://www.who.int/publications/i/item/978-92-4-154837-3>
5. Pediatric nutrition handbook, ed 7, Elk Grove Village, IL, American Academy of Pediatrics.2013. <https://www.vasiliadis-books.gr/Vasiliadis-books/wp-content/uploads/2015/06/PEDIATRIC-NUTRITION-LOOK-INSIDE.pdf>

Guidelines for the lessons of the discipline

Key questions covered in lesson #2. Nutritional Assessment Methods and techniques

- What is nutrition assessment?
- Why is nutrition assessment important?
- How often should nutrition assessment be done?
- What methods are there for nutritional assessment?
- What are the basic steps in nutrition assessment?
- What is ABCD of nutritional assessment?

Student able to do:

1. Taking anthropometric measurements
2. Collecting information about a client's medical history, clinical and biochemical characteristics, dietary practices, current treatment, and food security situation.

Homework should be written in copybook:

1. *Physical growth of children. Significance of assessment of physical growth of child.*
2. *Different factors influencing to growth: genetic, environmental, intrauterine and postnatal factors.*
3. *Methods of nutritional assessment (direct and indirect)*
4. *ABCD of nutritional assessment*
5. *Food pyramid*

Recommended reading for this discipline:

6. Ghai Essential Pediatrics, 9th Ed.
7. Nelson textbook of pediatrics, 21st ed.
8. WHO child growth standards: training course on child growth assessment. Interpreting growth indicators. Geneva, WHO, 2008 <https://www.who.int/tools/child-growth-standards>
9. Complementary Feeding Family foods for breastfed children. Department of Nutrition for Health and Development WHO, 2000
10. Pocket book of Primary health care for children and adolescents. WHO.2022.
<https://apps.who.int/iris/handle/10665/352485>

11. Pocket book of hospital care for children. WHO. 2013
<https://www.who.int/publications/i/item/978-92-4-154837-3>
12. Pediatric nutrition handbook, ed 7, Elk Grove Village, IL, American Academy of Pediatrics.2013. <https://www.vasiliadis-books.gr/Vasiliadis-books/wp-content/uploads/2015/06/PEDIATRIC-NUTRITION-LOOK-INSIDE.pdf>

Guidelines for the lessons of the discipline

Key questions covered in lesson #3. Nutritional requirements

- The importance and value of nutrients: energy, proteins, fats and carbohydrates and their impact on the growth and development of children.
- Acceptable macronutrient. Distribution ranges
- Nutritional counselling: healthy diet for children and adolescents
- Micronutrient and vitamin supplements

Homework should be written in copybook:

1. *The importance of energy, protein, fats, vitamins and micronutrients and macronutrients for the growing bodies of children*
2. *Basic principles to calculate of a child's energy, protein and fat needs according to age*
3. *The importance of a balanced diet*
4. *Nutritional counselling: healthy diet for children and adolescents*
5. *Micronutrient and vitamin supplements*

Recommended reading for this discipline:

1. Ghai Essential Pediatrics, 9th Ed.
2. Nelson textbook of pediatrics, 21st ed.
3. WHO child growth standards: training course on child growth assessment. Interpreting growth indicators. Geneva, WHO, 2008 <https://www.who.int/tools/child-growth-standards>
4. Pocket book of Primary health care for children and adolescents. WHO.2022.
<https://apps.who.int/iris/handle/10665/352485>
5. Pocket book of hospital care for children. WHO. 2013
<https://www.who.int/publications/i/item/978-92-4-154837-3>
6. Pediatric nutrition handbook, ed 7, Elk Grove Village, IL, American Academy of Pediatrics.2013. <https://www.vasiliadis-books.gr/Vasiliadis-books/wp-content/uploads/2015/06/PEDIATRIC-NUTRITION-LOOK-INSIDE.pdf>

Guidelines for the lessons of the discipline

Key questions covered in lesson #4 Types of nutritional problems

- Malnutrition, thinness and growth faltering
- Overweight and obesity
- Short stature
- Tall stature

Homework should be written in copybook:

1. *Visible severe wasting*
2. *Classification on nutritional status in children (interpretation growth indicators)*
3. *Strategies to prevent malnutrition*
4. *The vicious cycle of childhood obesity*
5. *Short and tall stature*

Recommended reading for this discipline:

1. Ghai Essential Pediatrics, 9th Ed.
2. Nelson textbook of pediatrics, 21st ed.
3. WHO child growth standards: training course on child growth assessment. Interpreting growth indicators. Geneva, WHO, 2008 <https://www.who.int/tools/child-growth-standards>
4. Pocket book of Primary health care for children and adolescents. WHO.2022. <https://apps.who.int/iris/handle/10665/352485>
5. Pocket book of hospital care for children. WHO. 2013 <https://www.who.int/publications/i/item/978-92-4-154837-3>
6. Pediatric nutrition handbook, ed 7, Elk Grove Village, IL, American Academy of Pediatrics.2013. <https://www.vasiliadis-books.gr/Vasiliadis-books/wp-content/uploads/2015/06/PEDIATRIC-NUTRITION-LOOK-INSIDE.pdf>
7. Dietary Reference Intakes: The Essential Guide to Nutrient Requirements. 2006 <https://nap.nationalacademies.org/catalog/11537/dietary-reference-intakes-the-essential-guide-to-nutrient-requirements>

Independent work of students

1. *Drawing up a diet for preschool children according to the food pyramid.*
2. *Drawing up a diet for school-age children according to the food pyramid.*
3. *Abstract on the topic: Obesity in children. Diagnosis and management of obese children.*
4. *Abstract on the topic: Acute severe malnutrition in children. Diagnosis and management of children with acute severe malnutrition.*