

MINISTRY OF HEALTH OF UKRAINE
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Hygiene and Ecology No. 2

Academic year 2024–2025

SYLLABUS OF EDUCATIONAL COMPONENT
«BASICS OF HEALTHY NUTRITION AND DIETETICS»

(name of educational component)

Optional educational component

Form of education full-time

Branch of knowledge 22 «Health»

Specialty 223 «Nursing»

Education and professional program «Nursing»

The first (bachelor's) level of higher education

Course fourth

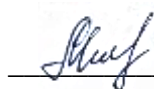
Form of education full-time

Branch of knowledge 22 «Health»

Specialty 223 «Nursing»

Syllabus of educational component reviewed at
the meeting of Department of Hygiene and
Ecology No. 2

Protocol of
«31» August 2023 No. 7
Acting Head of Department



Ass.Prof. Merkulova T.V.

Approved by KhNMU Methodical
Commission on Public Health Issues

Protocol of
«31» August 2023 No. 2

Head



Prof. Ognev V.A.

SYLABUS DEVELOPERS:

1. Zavgorodniy I.V., Doctor of Medical Sciences, Full Professor;
2. Merkulova T.V., Candidate of Medical Sciences, Senior Researcher, Associate Professor;
3. Chekhovska I.M., Senior Lecturer;

INFORMATION ABOUT THE TEACHER WHO TEACHES THE EDUCATIONAL COMPONENT

The name of the teacher	Position, academic title, scientific degree	Professional interests	Link to the teacher's profile
Merkulova T.V.	Candidate of Medical Sciences, Senior Researcher, Associate Professor at the Department of Hygiene and Ecology No 2	Hygiene and ecology	Moodle: http://31.128.79.157:8083/course/index.php?categoryid=31 +38(050) 738 58 08 tv.merkulova@knm.edu.ua
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Information about consultations:

Full-time consultations: schedule and venue according to the schedule of the training department.

Online consultations: schedule and venue by prior arrangement with the teacher.

Location: classes are held in the Department of Hygiene and Ecology № 2, KhNMU

INTRODUCTION

The syllabus of the educational component «Basics of healthy nutrition and dietetics» edited according to the educational professional program “Nursing” and to the Ukrainian higher education standard (following – Standard) of 1st (bachelor’s) level of branch of science 22 “Health”, specialty 223 “Nursing”.

Description of the educational component (abstract). Peculiarities of the educational process in a higher education institution require from the teacher wide knowledge and skills in various branches of science and economy. In recent years, the attention of specialists from around the world and Ukraine, working in various fields of health care, to the problems of healthy, wellness, personalized, including medical nutrition, is growing rapidly.

Mastering modern knowledge and implementing scientific developments and achievements of nutrition is a powerful factor in the prevention and treatment of non-communicable diseases (NCDs), increasing the duration of active human longevity, maintaining the physical, emotional and mental well-being of the population. Training of masters at the modern level, especially requires the acquisition of fundamental knowledge of nutrition, taking into account the elements of bioethics and nooethics in practice.

The subject of the educational component is the physiological basis of nutrition of a healthy person, nutritional characteristics of food, features of their impact on the human body, taking into account physiological, somatic and nutritional status, the specifics of age and occupational groups, nutritional correction of physiological and metabolic changes in various diseases and physiological conditions.

Interdisciplinary connections. The program is based on students' study of relevant sections of fundamental disciplines – medical biology, medical and biological physics, medical chemistry, bioorganic and biological chemistry, human anatomy, microbiology, virology and immunology, propaedeutics of internal medicine, physiology, pathomorphology, pathophysiology and biochemistry as well as human hygiene and ecology.

The discipline belongs to the elective disciplines.

Prerequisites. The study of the discipline involves the prior mastering of credits in theory and practice of nutrition.

Postrequisites. The main provisions of the discipline should be applied in the study of professional disciplines.

1. THE PURPOSE AND OBJECTIVES OF THE EDUCATIONAL COMPONENT

1.1. The purpose of teaching the educational component «Basics of healthy nutrition and dietetics» is the formation of students' necessary knowledge, skills, actions, goals, skills and professional outlook of a specialist in the field of training 22 «Health» specialty 223 «Nursing» students master the necessary knowledge, skills, actions, goals, skills that meet the final purposes of studying the discipline in accordance with Program and Standard.

1.2. The main objectives of the educational component «Basics of healthy nutrition and dietetics» are:

- deepening knowledge of the basics of physiologically sound nutrition of a healthy person (nutrition);
- acquisition of skills in identifying the causes of development and signs of mono- and polynutrient deficiencies and their prevention;
- mastering the importance of basic traditional and non-traditional foods, their composition, properties, nutritional and biological value, parapharmacological characteristics, importance in rational, therapeutic, dietary, therapeutic and prophylactic nutrition;
- mastering the basic principles of physiologically sound nutrition of a healthy person (nutrition), nutrition of different age groups, categories of the population (children and adolescents, the elderly, pregnant women and nursing mothers, mental and physical workers, athletes of various sports, etc.), medical preventive nutrition of production workers with harmful and especially harmful working conditions, preventive nutrition of persons living in environmentally unfavorable regions of Ukraine, as well as various non-traditional foods;
- acquisition of skills in identifying the causes and adequate nutritional correction of physiological and metabolic changes in the body in various diseases and physiological conditions, taking into account the specifics of the specialist in the specialty 223 «Nursing».

The optional course «Basics of healthy nutrition and dietetics» takes into account modern scientific developments and achievements of medical science in priority areas, on the basis of which the international program "Health of the Nation" is formed, which formulates the main problems of nutritional diseases and ways to overcome them in the world and in Ukraine. The elective course takes into account the recommendations of the European and international communities of nutritionists and nutritionists (Deutsche Gesellschaft für Ernährung – DGE, Scientific Committee on Food – SCF), which is especially important in teaching this course for students from other countries who receive higher medical education in Ukraine.

The educational process is organized according to the credit transfer system in accordance with the requirements of the Bologna process.

1.3 Competences and Programme results of training, the formation of which is facilitated by the discipline «Science of Nutrition».

1.3.1. According to the requirements of the standard, the discipline provides acquisition of *competencies* by students:

Integral: A bachelor of nursing is able to solve complex specialized tasks and practical problems in the field of nursing or in the learning process, which involves the application of certain theories and methods of the relevant science and is characterized by the complexity and uncertainty of conditions..

General:

GC 02. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of the subject area development, its place in the general system of knowledge about

nature and society, in the development of society, technology and technology; the ability to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.

GC 04. Ability to apply knowledge in practical situations.

GC 12. Interpersonal skills.

professional:

PC 01. The ability to apply professional and legal standards in daily professional practice.

PC 03. The ability to meet the needs of the patient/client throughout the lifetime (including the dying process) by planning, assisting and executing nursing interventions, evaluating and correcting individual care plans created in collaboration with the patient/client, caregivers, family members and other medical and social workers.

PC 05. The ability to effectively apply a combination of nursing skills (abilities), medical supplies, interventions and actions to ensure care based on a holistic approach, taking into account the satisfaction of the patient's needs for comfort, nutrition, personal hygiene and the ability of the individuals to meet their daily needs.

PC 08. Preventive activities of a nurse aimed at preserving and strengthening health, preventing diseases, informing, and educating the patient and his family members.

1.3.2. Studying of the academic component provides education seekers' achieving of following **program learning outcomes:**

PLO 06. To ensure a healthy microclimate in the team, using the principles of nursing ethics and deontology, the rules of interpersonal communication in order to create a favorable psychological microclimate, to be able to:

- communicate with the patient and members of his family or close friends, medical staff;
- to solve ethical and deontological problems in the process of working with the patient and his family members; consider and analyze professional mistakes in the team; conduct training for junior and technical personnel.

PLO 07. To participate in the monitoring of healthy and sick population, rehabilitation and dispensary supervision. In the conditions of health care facilities, at home and in the community, using the current orders of the Ministry of Health of Ukraine, in order to form, preserve and improve the health of the adult and child population, to be able to:

- keep records of dispensary population groups;
- to calculate and analyze statistical data of dispensation efficiency;
- conduct explanatory work among patients of different dispensary groups;
- keep records of health groups;
- calculate and evaluate individual indicators and indicators of the complex effect of the microclimate on the human body;
- to determine the stages of medical and social rehabilitation of the patient, tasks for each stage;

- make a complex of rehabilitation measures depending on the profile, course, period of the disease or injury;

- conduct a census of the child population.

PLO 11. To coordinate activities using a combination of multiple skills to ensure patient nutrition.

PLO 17. To plan and execute a preventive and an anti-epidemic measures for infectious diseases.

PLO 18. To organize and conduct training of patients and their family members on medical issues.

1.3.3. The study of the component provides students with the following **Soft skills**:

- communicativeness (realized through: method of work in pairs and groups, brainstorming, method of self-presentation),

- teamwork (implemented through the project method),

- conflict management (implemented through: dramatization method, game methods),

- time management (implemented through: project method, group work, training),

- leadership skills (implemented through: group work, project method, self-presentation method),

- empathy (realized through: respect for the opinion and ethical considerations, appearance and behavior of other people),

- stress resistance (implemented through: group work with representatives of other professional groups of different levels and ages in unforeseen circumstances and situations).

2. INFORMATIONAL VOLUME OF THE EDUCATIONAL COMPONENT

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the educational component	
		full-time education	evening form of study
Number of credits – 3	Branch of knowledge <u>22 «Health»</u> (code and name)	Full-time education Optional component	
Total number of hours – 90	Specialty: <u>223 «Nursing»</u> (code and name)	Year of preparation:	
			4
		Semester	
			7-й
		Lectures	
Hours for full-time form of study (or evening): classroom – 34 independent work of the student – 56	Education level: the first (bachelor's) level EPP «Nursing»	12 hours	
		Practical, seminars	
		22 hours	
		Laboratory	
		Not provided	
		Individual work	
		56 hours	
		Individual tasks: Not provided	
Type of control: credit			

2.1 Description of the educational component

2.1.1 Lectures

№	Name topics	Number of hours	Type of lecture
1	Nutrition as a Means of Health Improvement. Nutritional Foundations of Rational Nutrition. Functions of Food. Alternative and Non-traditional Types of Nutrition. Fundamentals of Dietetics. The Concept of 'Alimentary Diseases,' Their Classification.	2	review lecture
2	Nutritional and Dietetic Characterization of Basic Food Products. Assessment of Individual Nutritional Status of the Organism. Correction of Individual Nutritional Status Disorders.	2	problem lecture
3	Causes of Alimentary and Metabolic Disorders in Various Diseases (Introduction to Dietetics Propaedeutics). Bioethical Principles of Nutrition for Ill Individuals. Dietetic Considerations for Specific Diseases and Physiological States.	2	problem lecture with elements of discussion

4	Dietary Patterns for Specific Population Groups. Therapeutic Nutrition. Special Diets. Alimentary Prevention of Oncological Diseases.	2	problem lecture
5	Food Poisoning and Its Prevention.	2	problem lecture with elements of discussion
6	Therapeutic Nutrition for Cardiovascular Diseases, Respiratory Conditions, and Tuberculosis	2	problem lecture with elements of discussion
	Total hours	12	

2.1.2 Seminars are not provided

2.1.3 Practical classes

№	Name topics	Number of hours	Teaching methods	Form of control
1	Nutrition as a Means of Healing. Nutritional Foundations of Rational Eating. Functions of Food. Alternative and Non-traditional Dietary Practices. Basics of Dietetics. Concept of 'Alimentary Diseases,' Their Classification.	2	Individual (work with scientific literature), interactive methods of group work (presentation, narrative-explanation, discussions)	written survey
2	Nutritional and Dietetic Characteristics of Basic Food Products. Assessment of Individual Nutritional Status of the Organism. Correction of Individual Nutritional Status Disorders	2	interactive methods of group work (presentation, narrative-explanation, situational problem, discussions)	individual tasks, mutual control, test control
3	Nutritional and Dietetic Characteristics of Milk and Dairy Products. Bioethical and Medical Issues Related to the Consumption of Dairy Products by the Population of Ukraine	2	Individual (work with scientific literature), interactive methods of group work (presentation, narrative-explanation discussions)	individual tasks, mutual control, test control
4	Nutritional and Dietetic Characteristics of Meat and Meat Products, Eggs, Fish, and Seafood	2	interactive methods of group work (presentation, situational problem, discussions)	individual tasks, mutual control, test control
5	Nutritional and Dietetic Characteristics of	2	interactive	individual

	Bread, Bakery Products, Cereal Products, Legumes, and Other Grain Processing Products		methods of group work (presentation, situational problem, discussions)	tasks, mutual control, test control
6	Nutritional and Dietetic Characteristics of Confectionery Products. Honey and Beekeeping Products in the Diet of the Population, Their Nutritional and Biological Value, Medicinal, and Health Properties	2	interactive methods of group work (presentation, situational problem, discussions)	individual tasks, mutual control, test control
7	Nutritional and Dietetic Characteristics of Vegetables, Fruits, Berries, Nuts, Mushrooms, and Edible Wild Plants	2	Individual (work with scientific literature), interactive methods of group work (presentation, situational problem, discussions)	individual tasks, mutual control, test control
8	Nutritional and Dietetic Characteristics of Non-Alcoholic Beverages (Mineral Water, Sweetened Carbonated Drinks, Coffee, Tea, etc.) and Their Impact on Health	2	interactive methods of group work (presentation, situational problem, discussions)	individual tasks, mutual control, test control
9	Causes of Alimentary and Metabolic Disorders in Various Diseases (Introduction to Dietetics Propaedeutics). Bioethical Principles of Nutrition for Ill Individuals. Dietetic Considerations for Specific Diseases and Physiological States	2	Individual (work with scientific literature), interactive methods of group work (presentation, situational problem, discussions)	mutual control, frontal oral examination
10	Dietary Patterns for Specific Population Groups. Therapeutic Nutrition. Special Diets. Alimentary Prevention of Oncological Diseases	2	Individual (work with scientific literature), interactive methods of group work (presentation, situational problem, discussions)	test control, individual oral examination

11	Food Poisoning and Their Prevention	2	Individual (work with scientific literature), interactive methods of group work (presentation, situational problem, discussions)	mutual control, frontal oral examination
Total hours		10		credit

2.1.4 Laboratory classes are not provided

2.1.5 Independent work of the student includes elaboration of lecture material, methodical material, necessary information during preparation for the next practical lesson.

№	Name topics	Number of hours	Teaching methods	Form of control
1	Nutritiological basics of nutrition. Nutrition and health. Alimentary diseases and their prevention. Alternative and non-traditional foods	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
2	Assessment of individual nutritional status of the organism	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
3	Causes of violation of the nutritional status of the organism and scientific substantiation of its alimentary correction	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
4	Causes of vitamin and mineral status disorders and ways to solve the problem. Bioethical aspects of dietary restrictions due to economic, ethical and other issues. Bioethical problems of vegetarianism	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control, report
5	Nutritiological and dietary characteristics of milk, dairy products. Bioethical and medical problems are related to the consumption of dairy products by the population of Ukraine	4	Individual (work with scientific literature, with interactive material, with	self-control, mutual control

			methodical developments)	
6	Nutritiological and dietary characteristics of eggs, meat and meat products, fish, non-fish seafood	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
7	Nutritiological and dietary characteristics of confectionery. Honey and beekeeping products in the diet of the population, their nutritional and biological value, medicinal and health properties	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
8	Nutritiological and dietary characteristics of bread, bakery, cereals, legumes and other grain products	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
9	Nutritiological and dietary characteristics of vegetables, fruits, berries, nuts, mushrooms, wild edible plants	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
10	Nutritiological and dietary characteristics of soft drinks (mineral water, sweet carbonated drinks, coffee, tea, etc.), their impact on health.	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
11	Causes of alimentary and metabolic disorders in various diseases. Bioethical principles of nutrition of a sick person. Alimentary prevention of oncological diseases	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control, report
12	Changes in nutritional status in endocrine diseases and metabolic disorders	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control, report

13	Alimentary prevention of dysmetabolic disorders of different groups and categories of the population	4	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
14	Special purpose foods, dietary supplements, their use	2	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
15	Food additives, their classification, purpose and application. Genetically modified foods	2	Individual (work with scientific literature, with interactive material, with methodical developments)	self-control, mutual control
	Total hours	56		

3. ASSESSMENT CRITERIA

3.1. Assessment of students is carried out in accordance with the «Instructions for assessing the educational activities of students in the European credit transfer system for the organization of the educational process in KhNMU».

Current educational activity of students (further – CEA) is controlled by the teacher of the academic group, after mastering each topic of the discipline by students and grades are set using a 4-point (national) system. At the end of the semester, the teacher automatically receives the average grade (to the nearest hundredth) for CEA using an electronic journal of the ASU system.

For the discipline, the study of which is completed in the current semester and the form of its control is a test, the average score on the CEA teacher of the department is translated into a 200-point scale.

Control methods

When studying the discipline, the current and final semester control is used. Also, there is a mandatory control of the assimilation of educational material of the discipline, assigned to independent work.

Current control (mastering certain topics) is conducted in the form of oral interviews, testing, conversations of students on pre-defined issues, in the form of speeches of higher education students with reports when discussing educational issues in practical classes.

In order to assess the independent work of students, an alternative option is offered (optional): traditional types of tasks: writing a test, abstract or creative types: preparation of a multimedia presentation, elaboration of educational literature (annotation, reviewing, citation, abstracts, supplementing lectures).

Final semester control in the discipline is a mandatory form of control over the academic achievements of higher education students. It is performed orally. The terms of the final semester control are set by the schedule of the educational process, and the amount of educational material, which is submitted for the final semester control, is determined by the work program of the discipline.

The total number of rating points for the study of the discipline for the semester is calculated as the sum of points obtained by the results of the current control and points obtained by the results of the final semester control. The maximum number of points for the semester is 200 points, the minimum - 120 points.

The form of final control of academic performance in the discipline is a test. **Test** (in accordance with the «Instructions for assessing the educational activities of students ...») is conducted by the teacher of the academic group at the last lesson in the discipline and involves taking into account the CEI (table) and checking the mastering of all topics in the discipline. The score is determined in points from 120 to 200 and marked «passed», «not passed».

Recalculation of the average score for current activities in a multi-point scale. Carried out in accordance with the «Instructions for assessing the educational activities of students ...» (table)

4- score scale	200- score scale	4- score scale	200- score scale	4- score scale	200- score scale
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125
4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	Less 3	Not enough
4.5-4,51	180	3.72-3,73	149		
4.47-4,49	179	3.7-3,71	148		
4.45-4,46	178	3.67-3,69	147		
4.42-4,44	177	3.65-3,66	146		
4.4-4,41	176	3.62-3,64	145		
4.37-4,39	175	3.6-3,61	144		
4.35-4,36	174	3.57-3,59	143		

4.32-4,34	173	3.55-3,56	142
4.3-4,31	172	3.52-3,54	141
4,27-4,29	171	3.5-3,51	140
4.47-4,49	179	3.7-3,71	148
4.45-4,46	178	3.67-3,69	147
4.42-4,44	177	3.65-3,66	146
4.4-4,41	176	3.62-3,64	145
4.37-4,39	175	3.6-3,61	144
4.35-4,36	174	3.57-3,59	143
4.32-4,34	173	3.55-3,56	142
4.3-4,31	172	3.52-3,54	141
4,27-4,29	171	3.5-3,51	140

3.2.-3.3. Test questions for test. Control questions

1. The importance of nutrition as a factor that affects and shapes human health.
2. Features of human nutrition in modern conditions.
3. Characteristics of nutrition of the population of Ukraine.
4. Principles of nutrition.
5. Mechanisms of development of alimentary-caused diseases.
6. Principles of prevention of food-related diseases.
7. Principles of various non-traditional foods. (Separate nutrition. Raw food. Vegetarian nutrition. Nutrition of macrobiotics. The concept of "living energy", "spectacle diet", "miracle" food. Nutrition in the system of teaching yoga. Therapeutic fasting.).
8. The use of various non-traditional foods to correct the condition of the body.
9. Definition and indicators of nutritional status of the organism.
10. Indicators of energy and plastic adequacy of food status (mass-growth index of Brock, Krebs, Kettle index, thickness of skin and fat folds and others).
11. Indicators of protein adequacy of nutritional status of the organism.
12. Indicators of fat, carbohydrate adequacy of nutritional status of the organism.
13. Signs of providing the body with non-food carbohydrates.
14. Signs and indicators of providing the body with macro- and microelements and vitamins.
15. Biochemical indicators of nutritional status of the organism.
16. Methods of medical assessment of human nutritional status.
17. Physiological significance of proteins and amino acids. The main sources of its income.
18. Physiological significance of fats, fatty acids, phospholipids, sterols. The main sources of income.
19. Physiological significance of mono-, disaccharides and polysaccharides, including dietary fiber. The main sources of income.
20. Causes of violation of protein status (protein, protein-energy deficiency and excess). Clinical signs of excess and deficiency of protein.
21. Causes of fat status disorders. Clinical signs of excess fat, cholesterol, PUFA deficiency, especially of the ω 3 family.

22. Causes of violation of carbohydrate status. The concept of glycemic index. Comparative characteristics of glucose and fructose. Clinical signs of excess simple carbohydrates, lack of dietary fiber.
23. Physiological significance of water- and fat-soluble vitamins, vitamin-like substances. The main sources of income.
24. Physiological significance of macro- and microelements. The main sources of income.
25. Causes of hypo- and avitaminosis, methods of their prevention. Antivitamins.
26. Clinical signs of insufficiency of vitamins of group B. Additional researches which need to be carried out for specification of the diagnosis, their standard sizes. Dietary recommendations for the correction of this condition.
27. Clinical signs of ascorbic acid deficiency. Additional studies that need to be conducted to clarify the diagnosis, their normative values. Dietary recommendations for the correction of this condition.
28. Clinical signs of deficiency of fat-soluble vitamins. Additional researches which need to be resulted for specification of the diagnosis, their standard sizes. Dietary recommendations for the correction of this condition.
29. Clinical signs of potassium, calcium, magnesium deficiency. Additional studies that need to be conducted to clarify the diagnosis, their normative values. Dietary recommendations for the correction of this condition.
30. Clinical signs of iron, copper, zinc, iodine deficiency. Additional studies that need to be conducted to clarify the diagnosis, their normative values. Dietary recommendations for the correction of this condition.
31. Meat and meat products, their composition and properties, nutritional and biological value, parapharmacological properties, sanitary quality, epidemiological safety.
32. Meat and meat products, their importance in rational, therapeutic, dietary, therapeutic and prophylactic nutrition.
33. Fish and non-fish seafood, their composition and properties, nutritional and biological value, parapharmacological properties, sanitary quality, epidemiological safety.
34. Fish and non-fish seafood, their importance in rational, therapeutic, dietary, therapeutic and prophylactic nutrition.
35. Eggs and egg products, their composition and properties, nutritional and biological value, parapharmacological properties, sanitary quality, epidemiological safety.
36. Eggs and egg products, their importance in rational, therapeutic, dietary, therapeutic and prophylactic nutrition.
37. Confectionery, their composition and properties, nutritional and biological value, sanitary quality, epidemiological safety.
38. Honey and bee products, their composition, specific properties, importance in nutrition, parapharmacological properties.

39. Cereals and legumes, their composition and properties, nutritional and biological value, properties, sanitary quality, epidemiological safety.
40. Cereals and legumes, their importance in rational, therapeutic, dietary, therapeutic and prophylactic nutrition.
41. Features and physiological prerequisites of nutrition, specific effects of nutrients, principles and special foods for children and adolescents.
42. Features and physiological prerequisites of nutrition, specific effects of nutrients, principles and special foods for the elderly.
43. Features and physiological prerequisites of nutrition, specific effects of nutrients, principles and special foods for pregnant women and nursing mothers.
44. The concept of therapeutic and prophylactic nutrition, biological and nutritional supplements, their purpose.
45. Classification of biological and food additives.
46. The use of therapeutic and prophylactic nutrition, the use of biological and food additives.

3.4. Individual tasks

Individual work of students under the guidance of the teacher is carried out during the semester in the form of: study of literature sources recommended for mastering topics and problems, preparation of reports with presentations on them and abstract.

The abstract should have a volume of 10-16 pages of standard text (font size A4, font - Times New Roman, size - 14, line spacing - 1.5, paragraph indent - 1.25, width alignment, between paragraph indents - no) and fully disclose the content of selected issues. The presentation of the report should be performed in the software services PowerPoint, Prezi, Google slides, etc. The work should be structured and contain the title of the report, relevance, purpose, objectives, main content of the work, the list of used literature sources, designed in accordance with the existing requirements of DSTU 8302: 2015 «Information and documentation».

The maximum number of points that can be added to the current performance for an individual task is 10.

3.5. Rules for appealing the assessment

The grade in the discipline can be appealed on the basis of the requirements of the «Regulations on the organization of the educational process in KhNMU» № 203 from 31.08.2021.

4. DISCIPLINE POLICY

Academic expectations from students

Course requirements. It is expected that male and female students will attend all practical classes. If they missed classes, it is necessary to work it out (according to the schedule on the information stand of the department)

Written and homework must be completed completely and on time, if students have questions, you can contact the teacher in person or by e-mail, which the teacher will provide in the first practical lesson.

Practical trainings. Active participation during the discussion in the audience, students should be ready to understand the material in detail, ask questions, express their point of view, discuss. It's important during the discussion:

- respect for colleagues,
- tolerance for others and their experience,
- receptivity and impartiality,
- the ability to disagree with the opinion, but to respect the personality of the opponent,
- careful argumentation of his opinion and the courage to change his position under the influence of evidence,
- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,
- Mandatory acquaintance with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile.

Occupational Health. The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exits to the audience, where the fire extinguisher is, how to use it, etc.

The behavior in the classroom. Basic "yes" and "no". It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

It is allowed during classes:

- leave the audience for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take photos of presentation slides;
- take an active part in the class (see Academic expectations from students).

forbidden:

- eat (except for persons whose special medical condition requires another – in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages or drugs;
- use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- gambling;
- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- -houting, shouting or listening to loud music in classrooms and even in corridors during classes.

5. ACADEMIC INTEGRITY

The Department of Hygiene and Ecology № 2 maintains zero tolerance for plagiarism being guided in their activities by the Regulation on academic integrity and ethics of academic relations in KhNMU dated July 2, 2020 No. 165. Students are expected to constantly increase their own awareness of academic writing. The first lessons will include information activities on what to consider plagiarism and how to properly conduct research and scientific research.

6. RECOMMENDED BOOKS

Basic

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. 145 p.
2. Clinical Nutrition Basics for Medical Students Paperback / Amanda Velazquez – 2014 , 304 p.
3. Fundamentals of Human Nutrition: for Students and Practitioners in the Health Sciences, 12-th Edition/Catherine Geissler, Hilary Powers, 2011, p. 291-365.
4. Nutrition at a Glance 1st Edition / Mary Barasi 2014, p. 80-102.
5. Nutrition Counseling and Education Skills: A Guide for Professionals 7th Edition/Judith Beto, Betsy Holli , - 2018, p. 220-245.
6. Nutrition in Public Health 4th Edition /Sari Edelstein,- 2018.-p.183-225.

Auxiliary

1. Гігієна харчування з основами нутріціології / За ред. проф.В.І. Ципріяна/. 1 том., Київ: Медицина, 2007.- 528 с.
2. Гігієна харчування з основами нутріціології/ За ред. проф.В.І. Ципріяна/. 2 том., Київ: Медицина, 2007.- 560 с.
3. Противовоспалительное питание в профилактике и лечении хронических неинфекционных (в том числе опухолевых) заболеваний человека. Молекулярные защитные механизмы биоактивных компонентов пищи: монография/ В.Н. Залесский, Н.В. Великая, С.Т. Омельчук. – Винница: Нова Книга, 2014. – 736 с.
4. Научные основы потребления витаминов, минералов и растительных диетических добавок (ДД) в профилактике и лечении сердечно-сосудистых, онкологических и офтальмологических заболеваний: Монография/ В.Н. Залесский, Н.В. Великая. – К.: ЗАО «Випол», 2009. – 192 с.
5. Нутріціологія. Підручник для студентів вищих медичних навчальних закладів України III-IV рівнів акредитації. В.В. Ванханен, В.Д. Ванханен, В.І. Ципріян, Донецьк: Донеччина, 2001, 475 с.
6. Гігієна харчування. Методичні вказівки до практичних занять для студентів VI курсу за спеціальністю “Медико-профілактична справа” (В.В. Ванханен, В.Д. Ванханен, В.І. Ципріян), Донецьк: Донеччина, 2003, 89 с.
7. Методика оцінки харчового статусу людини та адекватності індивідуального харчування. Навчально-методичний посібник. В.І. Ципріян, Н.В. Велика, В.Г. Яковенко, Київ, 1999, 60 с.
8. Яцула Г.С., Слободкін В.І., Береза В.Я. Санітарно-гігієнічні методи дослідження харчових продуктів і води, К.: Здоров'я, 1991.288с.
9. Профилактическое питание в онкологии. В.І.Ципріян та ін. Луганск, «Ноулинж», 2010.-148с..

10. Павлоцька Л.Ф., Дуденко Н.В., Дмитрієвич Л.Р. Основи фізіології, гігієни харчування та проблеми безпеки харчових продуктів: навчальний посібник.- Суми: ВТД «Університетська книга», 2007.- 441 с.

7. INFORMATIONAL RESOURCES

Official web resources of the President of Ukraine, the Verkhovna Rada of Ukraine, the Ministry of Education and Science, the Ministry of Health and other central authorities of Ukraine, educational portals of higher medical educational institutions of Ukraine.

1. Official Internet Representation of the President of Ukraine <http://www.president.gov.ua/>
2. The Verkhovna Rada of Ukraine <http://www.rada.gov.ua/>
3. The Cabinet of Ministers of Ukraine <http://www.kmu.gov.ua/>
4. Ministry of Education and Science of Ukraine <http://www.mon.gov.ua/>
5. Ministry of Ecology and Natural Resources of Ukraine <http://www.menr.gov.ua/>
6. National Security and Defense Council of Ukraine <http://www.rnbo.gov.ua/>
7. Permanent Mission of Ukraine to the United Nations <http://ukraineun.org/>
8. World Health Organization <http://www.who.int/en/>
9. Centers for diseases control and prevention www.cdc.gov
10. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/>