MINISTRY OF HEALTH PROTECTION OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Department of Hygiene and Medical Ecology

APPROVE

Vice- rector for scientific and pedagogical work

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WORKING PROGRAM OF EDUCATIONAL DISCIPLINE " PRACTICAL DIETOLOGY "

Level of higher education: second (master's)

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Educational and professional program: Medicine

2023

The work program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Scientific Council of ONMedU (protocol No. 8 of June 29, 2023).

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The work program was approved at the meeting of the department of hygiene and medical ecology
Protocol No. 1 dated August 30, 2023.

Head of the department _____ Volodymyr BABIENKO

Agreed with the guarantor of the OPP _____ Valery MARICHEREDA

1. Description of the academic discipline:

Name of indicators	**Field of knowledge, specialty, specialization, level of higher education**	**Characteristics of the academic discipline**
Total number: Credits: 3 Hours: 90 Content modules: 2	Branch of knowledge 22 "Health care" Specialty 222 "Medicine" Level of higher education second (master's)	*Full-time education elective discipline*
		A year of training: 4
		Semester VII(VIII)
		Lectures (0 hours)
		Seminars (30 hours)
		Practical (0 hours)
		Laboratory (0 hours)
		Independent work (60 hours)
		including individual tasks (0 hours)
		The form of the final control is a credit

2. The purpose and tasks of the educational discipline

Goal:

Acquisition of theoretical knowledge, practical skills and abilities in all areas of dietetics, necessary for independent work as a nutritionist

Task:

The objectives of the study are to increase the level of theoretical and practical training in the following areas:

- Physiology and biochemistry of digestion;
- Estimates of the biological and energy value of the most common types of products and ways to increase them;
- Knowledge of hygienic requirements for food quality and safety;
- Organization and quality control of food in hospitals, sanatoriums preventive clinics, hospices;
- Peculiarities of changes in metabolic processes in the body in various pathological conditions and ways of correcting them with medical nutrition.

The process of studying the discipline is aimed at forming elements of the following competencies:

- IR – The ability to solve complex tasks and problems in a certain field of professional activity or in the learning process, which involves conducting research and/or implementing innovations and is characterized by the complexity and uncertainty of conditions and requirements.
- GC1 - Ability to abstract thinking, analysis and synthesis.
- GC2 - Ability to learn and master modern knowledge.
- GC3 - Ability to apply knowledge in practical situations.
- GC4 - Knowledge and understanding of the subject area and understanding of professional activity.

- GC5 - Ability to adapt and act in a new situation.
- GC6 - Ability to make informed decisions.
- GC7 - Ability to work in a team.
- GC8 - Interpersonal skills.
- GC9 - Ability to communicate in the state language both orally and in writing.
- GC10 - Ability to communicate in a foreign language.
- GC11 - Skills of using information and communication technologies.
- GC12 - Determination and perseverance regarding the assigned tasks and assumed responsibilities.
- GC13 - Ability to act socially responsibly and consciously.
- GC14 - Striving to preserve the environment.
- GC 15 - Ability to act on the basis of ethical considerations

- SK 5 - Ability to determine the nature of nutrition in the treatment of diseases.
- SK 13 - Ability to carry out sanitary and hygienic and preventive measures.

Program learning outcomes (PLO):

- PLO1 To have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

- PLO2 Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

- PLO3 Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

- PLO10 Determine the necessary regime of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

- PLO19 Plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.

- PLO20 Analyze the epidemiological situation and carry out measures for mass and individual, general and local prevention of infectious diseases.

- PLO21 Search for necessary information in professional literature and databases of other sources, analyze, evaluate and apply this information.

- PLO23 Assess the impact of the environment on the state of human health to assess the state of morbidity of the population. PLO24 To organize the necessary level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

- PLO25 Clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists.

Expected learning outcomes. As a result of studying the academic discipline, the student must:

Know:

- Scientific foundations, modern requirements for the organization of rational nutrition of various contingents of the population and alimentary diseases of systems and organs;
- Features of the directed effect of food components on various systems and organs;
- Modern requirements for the organization of dietary nutrition in diseases of various systems and organs;
- Basics of prevention of food poisoning and protection of food raw materials, food products and ready-made food in medical and preventive institutions;
- methodical approaches: to the rationing of the needs of healthy and sick people in food substances and energy; to the choice of food products when building diets; to the technology of preparing dietary food;
- Methodology for drawing up a menu, calculating the chemical composition and keeping a card file of the layout, seven-day menu (winter and summer version);
- Organization of scrapping of products and ready meals; laboratory control of food products and the state of the food block;
- Control the correctness of documentation by a nurse;
- Basic laws, by-laws and instructive methodological documents in the field of ensuring the safety and quality of used products;
- Forms and methods of work of a dietitian doctor in the organization of nutrition at medical and preventive institutions.

Be able:

- Make a daily menu taking into account the season and the availability of products;
- Organize the work on keeping a card file of dishes;
- Calculate the chemical composition and energy value of rations;
- Carry out work on the evaluation of the effectiveness of dietary nutrition;
- Assess the quality of food products, ready-made food in terms of nutritional and biological value, hygienic indicators;
- Conduct an analysis of the state of medical nutrition and justify recommendations for its improvement;
- Work independently with normative and reference literature on medical and preventive nutrition;
- Use the principles of primary and secondary prevention of the most common non-infectious diseases;
- Organize training of food block staff on hygiene and technology of preparation of medical diets;
- Control the timeliness of medical examinations of food block and cafeteria workers and prevent people from working who have not passed a medical examination, as well as patients with pustular, intestinal diseases and angina.

4. Content of the academic discipline

"PRACTICAL DIETOLOGY"

Content module 1. "General issues of dietetics"

Topic 1. Nutrition in medical and preventive institutions

The appointment procedure and organization of providing patients with medical nutrition. Quality control of products and ready-made food. Vitaminization of food with ascorbic acid. Features of medical cooking. Technology of preparation of medicinal dishes. Organization of dietary nutrition in sanatorium-resort institutions. Organization of dietary nutrition at industrial plants. Selection and referral program for dietary nutrition. Organization of medical nutrition for outpatients.

Topic 2. Basics of nutrition for a healthy and sick person

Basic principles of medical nutrition. Diet therapy tactics: graded system, "zigzag" system. Contrast diets: unloading and loading. Diet of patients. System of medical nutrition: elemental and dietary. Basic characteristics of diets: indications for use; target (therapeutic) purpose; energy value and chemical composition; peculiarities of culinary processing of food; diet; a list of prohibited and recommended foods. Characteristics of the main therapeutic number diets according to Pevzner. Characteristics of the new system of standard diets (2003): standard diet, diet with mechanical and chemical sparing, high-protein diet, low-protein diet, low-calorie diet. Comparison of numbered and standard diet systems

Topic 3. The system of standard diets in a medical organization, surgical diets, unloading and specialized diets, special diets

Ensuring the patient's needs for nutrients and energy. Therapeutic nutrition is built on the basis of physiological nutritional norms, but the amounts of energy and nutrient requirements depend on the pathogenesis, clinical course, stage of the disease, the nature of metabolic, functional and organic disorders characteristic of various diseases. Thus, in therapeutic diets, corrections are made to the balance of nutrients recommended for healthy people.

Topic 4. Organizational basics of nutrition in medical and preventive institutions.

Order of the Ministry of Health of Ukraine

10/29/2013 No. 931 Registered with the Ministry of Justice of Ukraine on December 26, 2013 under No. 2206/24738

Therapeutic nutrition is carried out in accordance with the principles and methodologies determined by the Procedure for the Organization of the System of Therapeutic Nutrition for Patients in Health Care Institutions, approved by Order No. 931 of the Ministry of Health of Ukraine dated October 29, 2013.

Topic 5. Rational nutrition. Basic principles and rules.

Rational balanced nutrition is a physiologically complete nutrition of a person taking into account his gender, age, nature of work, climate-geographical conditions, and individual characteristics. It provides the body with timely supply of tasty food containing nutrients - proteins, fats, carbohydrates, vitamins, macro- and microelements, which a person should receive in the optimal amount for the body and in certain ratios, which ensures the normal functioning of all systems and organs.

Topic 6. Therapeutic nutrition is a factor in therapy and secondary prevention of diseases.

Food components - some protein amino acids, vitamins provide a protective effect when the body is exposed to harmful chemical compounds and physical environmental factors (heavy metals, pesticides, nitrosamines, radionuclides, etc.). It has been proven that the body's resistance not only to foreign compounds (xenobiotics), but also to infections depends on the nature of nutrition, especially on the protein and vitamin composition of food.

Topic 7. Nutrition as a medical, social and economic problem

The concept of health includes normal physical and mental development, absence of diseases and hidden painful conditions, normal reproductive function in childbearing age. Health is the harmony and unity of physical, mental, spiritual, emotional and social functions. In the charter of the World Health Organization, it is written that health is a state of complete physical, moral and social well-being, and not just the absence of diseases or physical defects.

Among the factors shaping human health, nutrition accounts for 40-45%, human genetics - 18; health care - 10; environmental factors - 8 and others - 19-24.

Razenkov I.P. paid great attention to the role of nutrition and pointed out that, unlike other environmental factors, food is the most complex, multi-component factor. Depending on the properties and composition, food affects the body in different ways. With its help, we can change the function and trophism of tissues, organs, systems of the body as a whole arbitrarily, either by strengthening them or by weakening them.

Topic 8. Modern ideas about the biological role of nutrients and their importance in the metabolism of substances in the body in normal and pathological conditions

According to modern ideas, food performs important functions in the human body.

Maintaining them at an adequate exo- and endoecology level of a person ensures the stability of the internal environment of the body and guarantees a person good health.

It is known that human food is a multicomponent factor of the environment, containing more than 600 substances necessary for the normal functioning of the body. Each of these substances occupies a certain place in the complex harmonious mechanism of biochemical processes and contributes to the use of food in various processes of human life. 96% of organic and inorganic compounds obtained with food have one or another medicinal properties. Therefore, a person's health depends on the quantity and ratio of these substances in the diet.

Topic 9. Physiology and pathophysiology of digestion

In the process of life, the human body constantly consumes energy and various substances. The source of their replenishment is nutrients (food products), which come mainly from the external environment. Prolonged interruption of the supply of nutrients leads to the death of the organism. The function of food processing (digestion) in the body is performed by the

digestive system. The organs of the digestive system include: alimentary canal, pancreas, liver and gall bladder. The human digestive system begins with the oral cavity, followed by the pharynx, esophagus, stomach, small and large intestines. The alimentary canal ends with the anus. The length of the alimentary canal is 8–10 m. The alimentary system performs 3 main functions: motor, secretory and absorption (resorption).

Topic 10. Hygienic requirements for food products and their examination Sanitary and hygienic examination of food products and food raw materials is an important means of preventing food poisoning among the population of Ukraine. Basically indicators of their safety are the permissible levels of the content of substances of chemical and biological origin dangerous to health and life. Sanitary and hygienic measures need further improvement at the legislative level.

Content module 2. "Dietology in practical medicine"

Topic 10. Diseases of the cardiovascular system and diet therapy
A sedentary lifestyle and an abundance of fatty, refined food lead to obesity and problems with blood vessels. Therefore, prevention and treatment of cardiovascular diseases are closely related to lifestyle correction and diet control

Topic 11 Diseases of the kidneys, urinary tract and diet therapy
Quantitative and qualitative changes in nutrition are an integral part of the treatment of kidney diseases. One of the main goals is to achieve and maintain a normal body weight, as both obesity and underweight are associated with increased mortality. Obesity is a recognized cardiovascular risk factor and often coexists with hypertension and dyslipidemia, as well as accelerates the progression of chronic kidney disease.

Topic 12. Diseases of the endocrine system, metabolic disorders and diet therapy
Most autoimmune diseases, including thyroid diseases, depend on the nature of nutrition. According to research, 1/3 of the risk of developing an autoimmune disease depends on genetic predisposition, and 2/3 on nutrition, lifestyle and environmental factors (epigenetics). It has been scientifically proven that the use and refusal of certain food products helps not only to influence the body's immune response to its own organ, but also to enter a stable remission.

Topic 13. Respiratory diseases and diet therapy
Dietary nutrition plays an important role in the complex therapy of respiratory diseases. It is built individually taking into account the nature of the main process and its pathogenetic mechanisms, complications and associated diseases. It is necessary to remember the possible involvement in the pathological process of the cardiovascular system with the development of the pulmonary heart and insufficiency of blood circulation according to the right ventricular type. In particular, with emphysema of the lungs, medical nutrition is mainly prescribed based on the functional state of the cardiovascular system

Topic 14. Nutrition for some surgical diseases
In the postoperative period, the final result of the treatment depends on a rational diet - the timely recovery of the patient. Nutrient deficiencies significantly slow down wound healing and can lead to a worsening of the patient's condition. In turn, a sufficient diet serves as a guarantee of high tolerance to surgical trauma, an increase in the level of immune reactions and adequate reparative processes. Satisfaction of the energy and plastic needs of the body of a surgical patient is provided by a balanced diet. This is understood as the intake of a sufficient amount of proteins, fats and carbohydrates to the body in accordance with energy

expenditure, which increases in a pathological condition due to an increase in the basic metabolism

Topic 15. Diet therapy for concomitant lung diseases

Often, with lung disease, the alveoli are affected and there is breathing disorder. Treatment depends on the etiology, different types of medicines can be used, but diet is often forgotten. After all, it is precisely the right nutrition that will help to get rid of the disease faster and restore the body's strength.

Topic 16. Diseases of digestive organs and diet therapy

Among the most common diseases of the digestive organs are gastritis, peptic ulcer disease, gallstone disease, pancreatitis and colon cancer. Improper nutrition or a violation of the nutritional regime plays almost the main role in the development of these diseases.

Correcting the diet helps both in the treatment process and in the recovery process of the body after the illness and ensures the prevention of relapses.

Topic 17. Nutrition of pregnant and lactating women

Rational nutrition is one of the most important conditions for a favorable course of pregnancy, childbirth, and fetal development. It plays an important role in the prevention of anemia, delayed fetal development, and birth defects.

Topic 18. Food allergy and intolerance of some food components

Food allergy is a systemic immune reaction of the body that occurs after consuming certain foods. Worldwide, more than 250 million people suffer from food allergies, including 17 million in Europe. It is estimated that more than three percent of adults and up to six percent of children have food allergies. During a food allergy, the immune system mistakenly recognizes certain foods or substances in foods as something dangerous. Accordingly, the immune system prompts the cells to secrete antibodies known as immunoglobulin E to neutralize the allergens that caused the reaction. Knowledge of types of food allergies and food products that most often cause them is necessary for doctors of practical medicine.

Topic 19. Daily nutritional norms of patients in a medical organization, sanatoriums, preventive clinics

Nutritional norms in medical and preventive institutions are an integral component in the treatment and prevention of diseases of various nosologies. The main task in the preparation of daily nutritional norms for patients is to establish a balance between the physiological need for nutrients and energy (according to the requirements of rational nutrition) and the ability of an unhealthy organism to effectively dispose of them.

Topic 20. Interchangeability of products when preparing dietary dishes, replacement of products by proteins and carbohydrates

Order of the Ministry of Health of Ukraine dated 29.10.2013 No. 931 "Instruction on the organization of medical nutrition in health care institutions". Appendix 1 "Interchangeability of products in the preparation of dietary dishes"

Topic 21 Quality composition of food products. Importance of proteins, fats and carbohydrates in the diet. Vitamins, micro- and macroelements.

The quality of food products is a set of properties of goods that determine their suitability to satisfy certain human needs. A balanced diet is based on a solid foundation, which consists of three main and indispensable components: proteins, fats and carbohydrates. Each of them performs a certain role in the human body, just like vitamins, which also enter the human body with food and are of great importance in shaping human health.

Topic 22. Management, structure and organization of medical nutrition in medical and preventive institutions

Order of the Ministry of Health of Ukraine dated 29.10.2013 No. 931 "Instruction on the organization of medical nutrition in health care institutions"

The structure of the academic discipline

Names of content sections and topics	Number of hours					
	In total	**lectures**	**seminars**	**practical**	**laboratory**	**ISW**
*Content module 1. "**General issues of dietetics**"*						
Topic 1. Nutrition in medical and preventive institutions	**2**					2
Topic 2. Basics of nutrition for a healthy and sick person	**2**					2
Topic 3. The system of standard diets in a medical organization, surgical diets, unloading and specialized diets, special diets	**2**					2
Topic 4. Organizational basics of nutrition in medical and preventive institutions.	**2**					2
Topic 5. Rational nutrition. Basic principles and rules.	**4**		2			2
Topic 6. Therapeutic nutrition is a factor in therapy and secondary prevention of diseases.	**2**					2
Topic 7. Nutrition as a medical, social and economic problem	**2**					2
Topic 8. Modern ideas about the biological role of nutrients and their importance in the metabolism of substances in the body in normal and pathological conditions	**4**		2			2
Topic 9. Physiology and pathophysiology of digestion	**2**					2
Topic 10. Hygienic requirements for food products and their examination	**4**		2			2
Together according to content module 1	**26**		**6**			**20**

Content module 2. "Dietology in practical medicine"						
Topic 11. Diseases of the cardiovascular system and diet therapy	**6**		2			4
Topic 12 Diseases of the kidneys, urinary tract and diet therapy	**6**		2			4
Topic 13. Diseases of the endocrine system, metabolic disorders and diet therapy	**6**		2			4
Topic 14. Respiratory diseases and diet therapy	**6**		2			4
Topic 15. Nutrition for some surgical diseases	**6**		2			4
Topic 16. Diet therapy for concomitant lung diseases	**4**					4
Topic 17. Diseases of digestive organs and diet therapy	**6**		2			4
Topic 18. Nutrition of pregnant and lactating women	**6**		2			4
Topic 19. Food allergy and intolerance of some food components	**6**		2			4
Topic 20. Daily nutrition standards of patients in a medical organization, sanatoriums, preventive clinics	**6**		2			4
Topic 21. Interchangeability of products when preparing dietary dishes, replacement of products by proteins and carbohydrates	**2**		2			
Topic 22 Quality composition of food products. Importance of proteins, fats and carbohydrates in the diet. Vitamins, micro- and macroelements.	**2**		2			
Topic 23. Management, structure and organization of medical nutrition in medical and preventive institutions	**2**		2			
Together according to content module 2	**64**		**24**			**40**

In total	**90**		**30**			**60**

5. Topics of lectures / seminars / practical / laboratory classes

5.1. Topics of lectures

Not provided

5.2. Topics of seminar classes

№	Topic	Number of hours
1.	Rational nutrition. Basic principles and rules.	2
2	Modern ideas about the biological role of nutrients and their importance in the metabolism of substances in the body in normal and pathological conditions	2
3	Hygienic requirements for food products and their examination	2
4	Diseases of the cardiovascular system and diet therapy	2
5	Diseases of the kidneys, urinary tract and diet therapy	2
6	Diseases of the endocrine system, metabolic disorders and diet therapy	2
7	Respiratory diseases and diet therapy	2
8	Nutrition for some surgical diseases	2
9	Diseases of digestive organs and diet therapy	2
10	Nutrition of pregnant and lactating women	2
11	Food allergy and intolerance of some food components	2
12	Daily nutritional norms of patients in medical organizations, sanatoriums, preventive clinics	2
13	Interchangeability of products when preparing dietary dishes, replacement of products by proteins and carbohydrates	2
14	Quality composition of food products. Importance of proteins, fats and carbohydrates in the diet. Vitamins, micro- and macroelements.	2

15	Management, structure and organization of medical nutrition in medical and preventive institutions	2
	In total	30

5.3. Topics of practical classes

Not provided

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. Independent work of a student of higher education

№	Title of the topic/type of task – essay (multimedia presentation)	Number of hours
1	Topic 1. Nutrition in medical and preventive institutions	2
2	Topic 2. Basics of nutrition for a healthy and sick person	2
3	Topic 3. The system of standard diets in a medical organization, surgical diets, unloading and specialized diets, special diets	2
4	Topic 4. Organizational basics of nutrition in medical and preventive institutions.	2
5	Topic 5. Rational nutrition. Basic principles and rules.	2
6	Topic 6. Therapeutic nutrition is a factor in therapy and secondary prevention of diseases.	2
7	Topic 7. Nutrition as a medical, social and economic problem	2
8	Topic 8. Modern ideas about the biological role of nutrients and their importance in the metabolism of substances in the body in normal and pathological conditions	2
9	Topic 9. Physiology and pathophysiology of digestion	2
10	Topic 10. Hygienic requirements for food products and their examination	2
11	Topic 11. Diseases of the cardiovascular system and diet therapy	4
12	Topic 12 Diseases of the kidneys, urinary tract and diet therapy	4
13	Topic 13. Diseases of the endocrine system, metabolic disorders and diet therapy	4

14	Topic 14. Respiratory diseases and diet therapy	4
15	Topic 15. Nutrition for some surgical diseases	4
16	Topic 16. Diet therapy for concomitant lung diseases	4
17	Topic 17. Diseases of digestive organs and diet therapy	4
18	Topic 18. Nutrition of pregnant and lactating women	4
19	Topic 19. Food allergy and intolerance of some food components	4
20	Topic 20. Daily nutrition standards of patients in a medical organization, sanatoriums, preventive clinics	4
	In total	60

7. Teaching methods

Practical classes: conversation, solving situational problems, practicing skills, filling out protocols on the subject of classes, performing laboratory studies.
Independent work: independent work with recommended basic and additional literature, with electronic information resources, independent work with a bank of test tasks.

8. Forms of control and assessment methods (including criteria for evaluating learning outcomes)

Current control: oral survey, testing, assessment of performance of practical skills, assessment of performance of work with devices, solution of situational tasks, assessment of activity in class.

Final control: credit.

Evaluation of the current educational activity in a practical session:
1. Evaluation of theoretical knowledge on the subject of the lesson:
- methods: survey, solving a situational problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.
2. Assessment of practical skills on the topic of the lesson:
- methods: assessment of the correctness of the performance of practical skills
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical session is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Current evaluation criteria in practical training

Rating	Evaluation criteria
«5»	The student is fluent in the material, takes an active part in discussing and solving the situational problem, confidently demonstrates practical skills, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.

«4»	The student has a good command of the material, participates in the discussion and solution of the situational problem, demonstrates practical skills with some errors, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
«3»	The applicant does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational problem, demonstrates practical skills with significant errors.
«2»	The applicant does not possess the material, does not participate in the discussion and solution of the situational problem, does not demonstrate practical skills.

Credit is given to the applicant who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt.
Assessment is carried out: at the last lesson before the beginning of the examination session - with the tape system of learning, at the last lesson - with the cyclical system of learning. The credit score is the arithmetic mean of all components according to the traditional four-point scale and has a value that is rounded according to the statistics method with two decimal places after the decimal point.

9. Distribution of points received by students of higher education

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional assessment into a multi-point scale

Traditional four-point scale	200-point scale
Perfectly («5»)	185 – 200
Fine («4»)	151 – 184
Satisfactorily («3»)	120 – 150
Unsatisfactorily («2»)	Below 120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is assigned to students who have attended all classes in the

discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

Evaluation on the ECTS scale	Statistical indicator
A	Top 10% achievers
B	The next 25% of earners
C	The next 30% of earners
D	The next 25% of earners
E	The next 10% of earners

10. Methodological support

- Working program of the academic discipline
- Syllabus
- Methodical developments for practical classes
- Methodical recommendations for independent work of higher education applicants
- Multimedia presentations
- Situational tasks
- Electronic bank of test tasks by subdivisions of the discipline

11. Questions for preparing for the final inspection

1 Principles, methods and organization of medical nutrition
2 Basics of nutrition for a healthy and sick person
3 Nutrition as an element of modern complex treatment of patients
4 Pathogenetic principle of medical nutrition
5 Chemical composition of food and its effect on the body
6 Determination of the list of therapeutic diets
7 New nomenclature of diets (system of standard diets)
8 Surgical diets
9 Specialized diets
10 Weight loss diets
11 Compilation of a list of medical nutrition dishes, preparation of cards-schedules of medical nutrition dishes, seven-day menu of standard, special and personalized diets
12 Chemical composition and energy value of the standard diets used in the pharmaceutical industry
13 Ratio of natural food products and specialized products
food in the patient's daily diet
14 Carrying out work on the organization and preparation of the production program
control of the work of the food block and cafeteria in the medical organization
15 Control and inspection of ready-made food before issuing it to the department
16 Technological equipment of the food block
17 Transportation of ready-made food
18 Requirements for mandatory preventive and medical examinations

employees of the food block, distribution and buffet workers
19 Quality control of products upon their arrival at the warehouse and food block, requirements for
storage of product stock
20 List of documentation of the food block for food discharge and quality control
ready food
21 Ready-made food quality control journal (brokerage)
22 Requirements for the premises of cafeterias at branches of the LPZ
23 Transportation of ready-made food to the cafeteria of the LPZ
24 Control over the correctness of placing products during the preparation of dishes
medical nutrition, laying of specialized products, including mixtures of protein composite dry and vitamin-mineral complexes
25 Sampling at each meal
26 Monitoring the quality of ready-made food before issuing it to the department,
including sampling at each meal
27 Functional duties of officials regarding the organization of medical nutrition
28 Conducting work to control the timeliness of preliminary and periodic medical examinations of food block and cafeteria workers
29 Carrying out sanitary and educational work on the promotion of healthy and therapeutic nutrition among employees of medical organizations and patients
30 Conducting conferences, seminars with the participation of leading domestic specialists in the organization of medical nutrition for medical and nursing staff.
31 Conducting classes with the average medical staff on the methodology of conducting nutritional support.
33 Training of members of the nutritional support team at central bases on medical, enteral and parenteral nutrition.
34 Implementation of control over the organization of medical nutrition
35 Control over the volume of products available in the medical organization and their purchases, including specialized products included in the norms
medical nutrition: mixtures of protein composite dry and vitamin-mineral complexes

12. Recommended literature

1. Constitution of Ukraine.
2. Fundamentals of Ukrainian legislation on health care.
3. Law of Ukraine "On Ensuring Sanitary and Epidemic Welfare of the Population".
4. Zubor N. "Fundamentals of physiology and nutrition hygiene" 336p.
Center of educational literature, Kyiv 2019.
5. Food hygiene with the basics of nutrition: Textbook; in 2 books - Book: /Editor's note. Prof. V.I. Cypriana K.: Medicine, 2007. - 544 p.
6. Hygiene propaedeutics; textbook: in 2 vols. T1/ V.V., Babienko, A.V. Mokiyenko - Odesa: Press-courier, 2022. 400p.
7. Hygiene propaedeutics; textbook: in 2 volumes T2/ V.V. Babienko, A.V. Mokiyenko - Odesa: Press-courier, 2022. 400p.
8. ORDER OF THE MINISTRY OF HEALTH OF UKRAINE 03.09.2017 No. 1073 "On approval of the Norms of physiological needs of the population of Ukraine in basic food substances and energy"

Additional:

1. Pharmaceutical hygiene.: study guide/ V.V., Babienko, A.V. Mokienko, O.A. Gruzevskyi - Odesa: Press-courier, 2022. 324p.

2. "Hygiene in the practice of a dentist"; educational and methodological manual/ Babienko V.V., Mokiyenko A.V., Kobolev E.V./ Odesa: Press-courier. 2022 180 p.

13. Electronic information resources

1. http://moz.gov.ua – Ministry of Health of Ukraine
2. www.ama-assn.org – American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. http://bma.org.uk - British Medical Association
6. www.gmc-uk.org - General Medical Council (GMC)
7. www.bundesaerztekammer.de – German Medical Association