

National Pirogov Memorial Medical University, Vinnytsya

“APROVE”

Vice – Rector of higher education institution
Research, Education and Academic Affairs

professor of HEI Oksana
SEREBRENNIKOVA

“31” 08 2022 year

“AGREED”

Head of Department
of internal medicine №2

professor of HEI Serhii SHEVCHUK

“30” 08 2022 year

SYLLABUS
of academic discipline
«CURRENT ISSUES OF DIETOLOGY AND NUTRITIOLOGY»

Specialty	222 Medicine
Educational level	the second (master's) level
Educational programme	EPP Medicine, 2021
Academic year	2022-2023
Department	Internal medicine №2
Lecturer (if lectures are given)	Ass-professor of HEI Liubov MARYNYCH
Contact information	Internal medicine №2 Department, intmed2@vnmnu.edu.ua, SRI of Rehabilitation of Disabled (etc) VNMU, Vinnytsya, Khmelnytske highway str., 104, (0432) 435575
Syllabus compiler	Ass-professor of HEI Liubov MARYNYCH

1. Status and structure of the discipline

Discipline status	Elective
Discipline code in EPP/discipline place in EPP	EC 4.6, discipline of professional training
Course / semester	4th year (VIII semester)
The amount of discipline (the total number of hours / number of credits ECTS)	60 hours / 2 credits ECTS
Number of content modules	1 modules
The structure of the discipline	Lectures - 20 hours Practical classes 10 hours Independent work 30 hours
Language of study	English
Form of study	Full-time (<i>or remote full-time by order</i>)

2. Description of the discipline

Short annotation of the course, relevance.

The subject area of the program is the study of the composition and quality of food, nutrition and all biochemical processes related to food metabolism, used to treat diseases of internal organs and systems, the program focuses on professional competencies and ability to solve professional problems strengthening the health of the population, focused on the restoration of functional disorders that have arisen due to insufficient or excessive in relation to the physiological needs of the body consumption of essential nutrients and energy sources.

Prerequisites. For successful mastering of discipline, the student needs the knowledge received in the course of studying of the following general disciplines:

Human anatomy and physiology, medical biology, medical chemistry, medical and biological physics, pathophysiology, hygiene and ecology, pharmacology, propaedeutics of internal medicine, propaedeutics of pediatrics and integrates with these disciplines.

The purpose of the course and its significance for professional activities. The aim of the discipline is to form a system of theoretical knowledge, practical skills and abilities of students on the organization of nutrition of healthy and sick people at different ages by applying modern scientific provisions of nutrition and nutrition in health care, health and educational institutions, as well as prevention methods. specially selected diet.

Postrequisites. Lays the foundations for students of internal medicine, gastroenterology, endocrinology, neurology, pediatrics, obstetrics and gynecology and other subjects of the curriculum, which integrates teaching with these disciplines and the application of knowledge of nutrition in further study and professional activities.

3. Learning outcomes. After successful study of the discipline the applicant will be able to:

After successful study of the discipline the applicant will be able to:

1. To deep knowledge of the basics of physiologically sound nutrition of a healthy person (nutrition);
2. Acquire skills in identifying the causes of development and signs of mono- and polynutrient deficiencies and their prevention;
3. Assimilate 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 preventive nutrition;

4. Master 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 in various sports, etc.), medical and preventive nutrition of 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;

5. Acquire skills in identifying the causes and adequate nutritional correction of physiological, metabolic changes in the body in various diseases, physiological and pre-pathological conditions (genetically associated, environmentally associated, production-associated, age-dependent, stress-associated, etc.).

4. Content and logistic of the discipline

Module 1. Current issues of dietology and nutritiology	8 semester 60 hours / 2 credits	Lectures №№ 1-10 Practical classes №№ 1-5
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The course includes 5 topics, 1 thematic module.

Module 1. Current issues of dietology and nutritiology.

Topic 1. Scientific apparatus of nutrition. Connection of nutrition with other sciences. Biological, environmental and social aspects of nutrition. The organization of nutrition as part of the overall task of forming a healthy lifestyle. Representation of scientists of the ancient world on nutrition. Founders of modern nutrition. The main scientific problems in the field of nutrition.

Topic 2. The main functions of food: energy, plastic, bioregulatory, adaptive-regulatory, protective-rehabilitation and signal-motivational. The concept of essential and non-essential nutrients. Biological and nutritional value of organic substances: proteins, carbohydrates, lipids. The importance of vitamins in a balanced diet. Macro- and microelements. Dietary fiber, fiber. Indications for the use of dietary fiber. The action of refined foods. The body's need for nutrients.

Topic 3. Fundamentals of diets. Basic principles of therapeutic nutrition. Diet therapy tactics: step system, zigzag system. Contrasting diets: unloading and loading. The diet of patients. Therapeutic nutrition system: elemental and dietary. The main characteristics of diets: indications for use; target (medical) purpose; energy value and chemical composition; features of culinary processing of food; diet; Organization of medical nutrition. The order of appointment and organization of providing patients with medical nutrition.

Topic 4. Functional principles of substantiation of diet in cardiovascular diseases. General characteristics of forms and stages of atherosclerosis, hypertension, myocardial infarction. Diet therapy as a means of balanced nutrition, hypocholesterolemic and lipotropic action. List of products that are recommended and excluded from the diet in diseases of the cardiovascular system. Functional principles of substantiation of diet in diseases of the respiratory system. General characteristics of chronic and acute diseases of the bronchi, lungs and pleura. Diet as a means of anti-inflammatory, detoxifying and restorative action. List of products that are recommended and excluded from the anti-inflammatory diet. Hypochloride diet.

Topic 5. Functional principles of substantiation of diet in diseases of the gastrointestinal tract. Features of diet therapy for functional disorders of the stomach: hypo- and hypersecretion, hypo- and hypertension of the stomach. General characteristics of forms and stages of gastritis, peptic ulcer, colitis, enterocolitis. Diet therapy as a means of complete, varied and balanced nutrition, rhythmic diet, prevention of excessive mechanical and chemical irritation of the gastrointestinal tract. Functional principles of substantiation of diet in endocrine and metabolic diseases. General characteristics of forms and stages of hypothyroidism, hyperparathyroidism, hypoparathyroidism, diabetes mellitus and diabetes mellitus, adrenal insufficiency, obesity, gout. Diet therapy as a means of limiting the body's energy expenditure and stabilizing metabolic disorders. Approximate trial, training low-calorie diet.

Types of education according to the curriculum are: a) lectures, b) practical classes, c) independent work of students, d) consultations.

The topics of the lecture course reveal problematic issues of dietology and nutritiology.

Practical classes provide a theoretical justification of the main issues of the topic and the acquisition of the practical skills.

In practical classes, students develop the diet of patients with diseases of the internal organs and endocrine system, motor and dietary recommendations, drinking regime and discuss the basic principles of diet therapy.

The student's independent work involves preparation for practical classes and development of practical skills, study of topics for independent extracurricular work, preparation of presentations, tables, processing of scientific literature and writing reviews of the provided topics for individual work. Control of mastering the topics of independent extracurricular work is carried out at intermediate control classes and final control of the discipline.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent extracurricular work, volume and directions of individual work are published on the site of the department.

The route for obtaining materials: internal medicine №2 department / for students / Full-time education / medicine / 4 course / Educational materials / or through the link <https://www.vnmu.edu.ua/> internal medicine №2 department #. Access to the materials is carried out through the student's corporate account s000XXX@vnmu.edu.ua.

5. Forms and methods of monitoring academic performance

Current control in practical studies	Methods: oral or written survey, testing, electronic survey, solving situational problems, conducting clinical examinations of the patient with the formation of a rehabilitation plan.
Control of mastering the thematic section of the discipline at intermediate control classes	Methods: oral or written survey, electronic testing, control of practical skills.
Final control of the discipline - test	Methods: pre-examination testing, oral questioning (according to the Regulation of the Academic process in National Pirogov Memorial Medical University (link https://www.vnmu.edu.ua/ General information))
Learning success diagnostic tools	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, practical skills demonstration

6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in National Pirogov Memorial Medical University (link <https://www.vnmu.edu.ua/>General information))

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
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Midpoint separation assessment	On a four-point system of traditional assessments
Control of practical skills	According to the four-point system of traditional assessments
Test	On a 200-point scale (the arithmetic average grade for the semester is converted into points) Credited: 122 to 200 points Not credited: less than 120 points (See Grading Scale)
Final control of the discipline	The sum of points for the oral examination (50-80 points) Score for differential credit: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" <i>Less than 50 points - "unsatisfactory" / did not pass</i>
Discipline assessments:	Current academic assessment - from 72 to 122 points (conversion of the average traditional assessment of practical class on a 120-point scale): 60% of the grade for the discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points From 122 to 200 points in total.

Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	A	excellent	credited
170-179,99	B	good	
160-169,99	C		
141-159,99	D	satisfactory	
122-140,99	E	satisfactory	
0-121,99	FX	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
	F	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

Criteria for student knowledge assessment

Assessment of oral / written response during the current assessment

The grade "excellent" is given to a student who has deeply and comprehensively mastered the theoretical material, competently and logically teaches it. He is fluent in Latin terminology, clearly answers non-standard questions on the topic of the lesson, is able to link the material of the topic with previously studied sections, which indicates knowledge of the recommended literature and the ability to analyze the material studied, and clearly demonstrates the importance of theoretical knowledge for practice. Medicine

The grade "good" is given to a student who knows and has a good theoretical material, teaches it correctly, does not allow inaccuracies in the answer, is able to reveal the topic from the standpoint of its medical significance and practical application, but the answers do not go beyond the textbook, guidelines.

A grade of "satisfactory" is given to a student who knows the basic concepts and definitions of the studied topic, but admits significant inaccuracies or has difficulty in formulating the answer, does not understand the medical aspects of the topic, can not relate theoretical material to practice.

The grade "satisfactory" is given to a student who knows the basic concepts and definitions of the studied topic, but admits significant inaccuracies or has difficulty in formulating the answer, does not understand the medical aspects of the topic, can not relate theoretical material to practice.

The grade "unsatisfactory" is given to a student who does not know the theoretical foundations of the topic, makes gross mistakes in answering, does not understand the basic concepts and definitions, can not explain the importance of theoretical material for practical medicine.

Assessment of practical skills during the current assessment

A grade of "excellent" is given to a student who knows the course and sequence of independent teaching and research work to perform a practical task, demonstrates the correct implementation of the necessary practical skills, and is true with clear formulations of generalizations and conclusions.

A grade of "good" is given to a student who admits inaccuracies in the performance of a practical task, but is able to identify errors and can demonstrate the performance of practical skills in general.

Assessment of "satisfactory" is given to a student who knows the basics of the practical task, but has difficulty in performing it, can not demonstrate the full correct sequence of practical skills, can not fully interpret the results of research.

Grade "unsatisfactory" is given to a student who can not demonstrate the implementation of practical skills, experiences significant difficulties in their implementation, violates the procedure for practical work.

The calculation of individual points is carried out on the basis of the Regulation of the Academic process in National Pirogov Memorial Medical University (link [https://www.vnmu.edu.ua/General information](https://www.vnmu.edu.ua/General%20information)).

12 points - added to the assessment of the discipline of a student who won a prize at the interuniversity Olympiads in the discipline or a prize at the All-Ukrainian competition of student

research papers or a prize at the interuniversity / international scientific conference with the availability of printed work

11 points - are added to the assessment of the discipline of a student who won the first place in the intra-university Olympiad in the discipline or the first place at the student scientific conference with the presence of printed work, or participated in the All-Ukrainian competition of student research papers

10 points - are added to the assessment of the discipline of the student who won a prize (II-III) at the intra-university Olympiad in the discipline or at the student scientific conference with the availability of printed work; or for participation (without a prize place) in interuniversity competitions in the discipline or a prize place in an interuniversity / international scientific conference with the availability of printed work.

9 points - are added to the assessment of the discipline of the student who participated (without a prize) in the intra-university Olympiad in the discipline or student scientific conference with the presence of printed work

8 points - are added to the assessment of the discipline of a student who actively participated in the student scientific group, published a paper on the results of scientific and practical research, but did not personally participate in the student scientific conference, prepared a poster report.

6 points - are added to the assessment of the discipline of the student who made at least 3 tables, or an educational video to replenish the visual support of teaching the discipline (taking into account the volume and importance of the work performed).

3 points are added to the assessment of the discipline of a student who has made at least 2 tables, or created a thematic illustrated presentation to supplement the visual support of teaching the discipline (taking into account the volume and importance of work performed).

1. Policy of discipline / course

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified tutoring during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in National Pirogov Memorial Medical University and the principles of academic integrity (link [https://www.vnmu.edu.ua/General information](https://www.vnmu.edu.ua/General%20information)).

Adherence to the rules of VNMU, safety techniques in practical classes.

Observance of the rules of the VNMU regulations, safety precautions at practical classes. Safety instruction is given at the first practical lesson by the teacher. The instructed students are registered in the Safety Instruction Journal. A student who has not been instructed is not allowed to perform practical work.

Requirements for preparation for practical classes.

The student should be prepared for a practical lesson, testing tasks for the current topic should be solved in a workbook, diagrams and tables are filled.

A student should come to class on time, without delay. A student who is more than 10 minutes late is not allowed to the practical class and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform (medical gown, hat). Students who do not have a work uniform are not allowed to practice.

The student must follow the rules of safety in practical rooms and at the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and be cleaned after performing practical work.

Usage of mobile phones and other electronic devices.

The use of mobile phones and other electronic devices in the classroom is allowed only during electronic testing or surveys.

Academic integrity. When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of National Pirogov Memorial Medical University (link : [https://www.vnmnu.edu.ua/General information/](https://www.vnmnu.edu.ua/General%20information/) Code of Academic Integrity). In case of violation of the norms of academic integrity during the current and final controls student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment).

Missed classes. Missed classes are working out in the manner prescribed by Regulations of the Academic process in National Pirogov Memorial Medical University (link [https://www.vnmnu.edu.ua/General information](https://www.vnmnu.edu.ua/General%20information/)) at the time of work out schedule (published on the website of the department [https://www.vnmnu.edu.ua/ internal medicine №2 department #](https://www.vnmnu.edu.ua/internal%20medicine%20department%20#)) to the teacher on duty. To work out missed lesson student must provide a completed workbook protocol on the relevant topic, take a test and answer questions in writing or orally to the topic of the lesson. The reworking of missed lectures is carried out after providing a thesis of lecture material, or preparing own presentation on the topic of missed lecture.

The procedure for admission to the discipline final control is given in the Regulation of the Academic process in National Pirogov Memorial Medical University (link [https://www.vnmnu.edu.ua/General information](https://www.vnmnu.edu.ua/General%20information/)). Students who do not have missed practical classes and lectures and received an average traditional grade of at least "3" are allowed to final control.

Additional points. Individual points in the discipline that student can receive for individual work, is determined by the results of his individual work according to Regulation of the Academic process in National Pirogov Memorial Medical University (link [https://www.vnmnu.edu.ua/General information](https://www.vnmnu.edu.ua/General%20information/)) and policy of the course.

Conflict resolution. In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has a right to apply to the head of the department according to Complaints Consideration Procedure ([https://www.vnmnu.edu.ua/ General information / Basic documents](https://www.vnmnu.edu.ua/General%20information/Basic%20documents/)).

Politics in terms of remote learning. Distance learning regulated by the Regulations of the elements of remote learning in National Pirogov Memorial Medical University ([https://www.vnmnu.edu.ua/ General information](https://www.vnmnu.edu.ua/General%20information/)). The main training platforms for studying are Microsoft Team and Google Meets. Practical classes and lectures, exercises and consultations

during distance learning is published on the website of the department (<https://www.vnmu.edu.ua/> internal medicine №2 department / Student or <https://www.vnmu.edu.ua/> internal medicine №2 department / News).

Feedback from teachers is via messengers (Viber, Telegram, WhatsApp) or e-mail (at the teacher's choice) during working hours.

Educational resources.

Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmu.edu.ua/en/> internal medicine №2 department / for students). Consultations are held twice a week according to the schedule.

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.

Additional:

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. Навчальнометодичний 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. - 288 с.
9. Гігієна та екологія. Підручник/ За редакцією В.Г. Бардова. – Вінниця: Нова книга, 2018. – 726 с.

Information resources:

1. National Pirogov Memorial Medical University, Vinnytsya: <http://vnmu.edu.ua>
2. Library of National Pirogov Memorial Medical University, Vinnytsya: <http://library.vnmu.edu.ua>

3. Testing center: <https://www.testcentr.org.ua/uk/>
4. Ministry of Health of Ukraine: <https://moz.gov.ua/>
5. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
6. World Health Organization: <https://www.who.int/ru/home#>
7. <http://www.medstat.com.ua>
8. <http://www.cochrane.org>
9. <http://www.cochrane.ru>
10. <http://www.statsoft.ru/houm/portal>
11. <http://www.gastropodium.com>
12. Medical calculators: <https://www.mdcalc.com/>
13. Body mass index calculator: <https://www.bmi-calculator.net/>
14. <http://medscape.org/>

The timetable and distribution of groups with assigned teachers are published on the web page of the department ([https://www.vnmu.edu.ua /en/ internal medicine №2 department / for students](https://www.vnmu.edu.ua/en/internal-medicine-no2-department-for-students)).

Questions to the intermediate and final semester control (credit) of the discipline are published on the web page of the department ([https://www.vnmu.edu.ua / en/ internal medicine №2 department / for students](https://www.vnmu.edu.ua/en/internal-medicine-no2-department-for-students)).

The syllabus of the discipline "Current issues of dietology and nutritiology" was discussed and approved at the meeting of the Internal medicine №2 department (record № 5, dated " " December 2021)

Responsible for the academic discipline "Current issues of dietology and nutritiology"

Ass-professor of HEI



(signature)

Liubov MARYNYCH

Head of the Internal medicine №2 department

Professor of HEI



(signature)

Serhii SHEVCHUK