



Essentials of human nutrition

Podstawy żywienia człowieka

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Non-compulsory
Form of verification of learning outcomes	credit
Educational Unit / Educational Units	Department of General, Gastroenterology and Oncologic Surgery, Medical University of Warsaw, 1a Banacha St, 02-097 Warsaw, III rd floor, block "B" phone: (22) 599 22 57 e-mail: gastrochirurgia@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Maciej Słodkowski, MD, PhD
Course coordinator	Aneta Jachnis-Morzy, Msc, PhD Email: aneta.jachnis@wum.edu.pl
Person responsible for syllabus	Aneta Jachnis-Morzy, Msc, PhD Email: aneta.jachnis@wum.edu.pl
Teachers	Aneta Jachnis-Morzy, Msc, PhD Email: aneta.jachnis@wum.edu.pl

2. BASIC INFORMATION

Year and semester of studies	III-V year, winter semester	Number of ECTS credits	2.00
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FORMS OF CLASSES	Number of hours	ECTS credits calculation
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)	30 (e-learning)	1.20
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	20	0.80

3. COURSE OBJECTIVES

O1	Introducing students to the basics of dietetics, principles of proper nutrition and human demand for nutrients
O2	Defining the basic functions of the digestive system and the role of a proper diet in the treatment and/or prevention of digestive system diseases (elementary information).
O3	Determining the basis of human metabolism (the influence of diet on the production of neurotransmitters and the regulation of hunger and satiety).
O4	Understanding the role and sources of individual nutrients necessary for the proper functioning of the body.
O5	Assessment of energy and nutrient requirements. Basics of nutrition planning and assessment.
O6	Description and analysis of popular diets and nutrition models. Ability to apply dietary prevention of diet-related diseases

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	Effects in the field of: SCIENTIFIC FOUNDATIONS OF MEDICINE PRE-CLINICAL SCIENCE NON-SURGICAL CLINICAL SCIENCE
Knowledge – Graduate* knows and understands:	
B.W1	water and electrolyte balance in biological systems;
B.W11	The structure of lipids and polysaccharides and their functions in cellular and extracellular structures
B.W12	primary, secondary, tertiary and quaternary structures of proteins, as well as the posttranslational and functional modifications of proteins and their importance;

B.W15	basic catabolic and anabolic pathways, how they are regulated by genetic and environmental factors;
B.W18	processes, such as the cell cycle, proliferation, differentiation and aging of cells, apoptosis and necrosis, as well as their importance for the functioning of the organism;
B.W21	function and regulatory mechanisms of all organs and systems in human body, including circulatory system, respiratory system, alimentary system, urinary system and skin and understands the relationships between them;
B.W23	Ageing processes and organ function changes associated with ageing;
B.W25	relationship between disturbing the balance between biological factors and physiological and pathophysiological changes;
C.W36	main mechanisms of drug effects and their changes in the body depending on age;
C.W48	consequences of deficiency or excess of vitamins or minerals in human organism;
C.W50	consequences of improper nutrition, including long-term starvation, too square meals and unbalanced diet and disorders of digestion and absorption of digestion products;
D.W1	social dimension of health and disease, influence of society (family, social relationships network) and social inequalities on health condition, as well social and cultural differences and the roles of social stress in health and self-destructive behaviours;
E.W1	environmental and epidemiological determinants of the most common illnesses;
E.W2	rules of nutrition of healthy and sick children, protective vaccinations and routine children's health checks;
E.W23	environmental and epidemiological conditions of the most common cancers;

Skills– Graduate* is able to:

B.U9	use the basic measurement equipment and assess the precision of the measurements;
B.U10	use databases, including the Internet and search for needed information with available tools;
E.U1	collect medical history from adult patients;

* In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „graduate”, not student is mentioned.

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	Effects in the fields of:
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Knowledge – Graduate knows and understands:

K1	The structure of macronutrients and their functions in human body and food sources
K2	Nutrition therapy in selected gastrointestinal diseases
K3	The role of nutrition in neurodegeneration and aging of the body
K4	Laboratory tests to assess nutritional status. Body composition analyses
K5	The impact of diet on the human microbiome. The role of microbiome.

K6	Nutrients affecting tissue regeneration and antioxidant activity
K7	Pathogenesis of selected diet-related diseases
K8	Interactions between drug, supplements and nutrients. The impact of drug on nutritional status.

Skills– Graduate is able to:

S1	Take a nutritional interview of an adults, assessing the degree of malnutrition
S2	Making basic nutrition plan
S3	Identify nutritional and lifestyles determinants of health indicators of anti-health and self-destructive behaviors and discuss them with the patients and make not in the medical documentation

Social Competencies – Graduate is ready for:

SC1	
SC2	

6. CLASSES

Form of class	Class contents	Effects of Learning
Seminar 1 (e-learning)	Human digestive system – basic information, the role of diet in the proper functioning of digestive system organs	B.W1, B.W11, B.W12, B.W15, B.W18, B.W21, B.W23, B.W25, C.W36, C.W48, C.W50, D.W1, E.W1, E.W2, E.W23, B.U9, B.U10, E.U1, K1, K2, K3, K4, K5, K6, K7, K8, S1, S2, S3
Seminar 2 (e-learning)	*Regulation of hunger and satiety *Regulation of glycemia, insulin resistance and lifestyle factors	
Seminar 3 (e-learning)	Nutrients; food sources, bioavailability, effects of excess and deficiency of vitamins and minerals	
Seminar 4 (e-learning)	*Evaluation of nutritional status, laboratory tests, methods of assessing body composition, anthropometric measurements. *Drug and food interactions. Nutritional interview, methods of assessing food intake.	
Seminar 5 (e-learning)	Nutritional metabolism; basal metabolic rate, total energy expenditure, food-induced thermogenesis, physical activity. spontaneous and unintentional physical expenditure	
Seminar 6 (e-learning)	The importance of diet in selected diet-related diseases. Dietary prevention (malnutrition, obesity, selected cardiovascular diseases, metabolic diseases and cancers)	
Seminar 7 (e-learning)	Healthy dietary alternatives. The role of antioxidants, superfoods, anti-aging nutrition.	
Seminar 8 (e-learning)	Gut Microbiota. The impact of diet and lifestyle on gut microbiota, the role of probiotics and prebiotics. The integrity of the intestinal barrier	
Seminar 9 (e-learning)	Incorrect eating behaviors and other lifestyle factors, (alcohol, physical activity, sleep, social relations, behavior, interest, environment, mental health)	
Seminar 10 (e-learning)	*Popular diets – division, effects of incorrect nutritional model (MIND Mediterranean diet, DASH, IF, easily digestible diet, low glycemic index diet, plant diet) *Facts and myths in dietetics (new trends and research in nutrition)	

7. LITERATURE

Obligatory

All materials included in the e-learning course (prepared by the lecturer)

Supplementary

1. Introduction to Human Nutrition, Third Edition. Susan A. Lanham-New. Willey.
2. <https://www.cambridge.org/core/books/nutritional-psychiatry/basic-principles-of-nutrition/8CDCDC38AA1DCC3544D3300C3AEC4C48>

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
B.B.W1, B.W11, B.W12, B.W15, B.W18, B.W21, B.W23, B.W25, C.W36, C.W48, C.W50, D.W1, E.W1, E.W2, E.W23, B.U9, B.U10, E.U1, K1, K2, K3, K4, K5, K6, K7, K8, S1, S2, S3	On e-learning platform: quiz, test, written report	To pass the course the following criteria must be met: - listening to all online materials - completing all e-learning tests/tasks (each test with a minimum score of 60%) - passing the final test with a minimum score of 60%

9. ADDITIONAL INFORMATION

Link to e-learning will be sent by mail to MUW student email account within 2 weeks of the end of registration.

Access to course will be available from 24/10/2025 till 25/01/2026 year !

The student is required to check the student email regularly during the course. All current information will be sent only in this way.

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ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers