



Essentials of human nutrition

1. IMPRINT

Academic Year	2024/2025
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
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	e-learning test (credit)
Educational Unit / Educational Units	Department of General, Gastroenterology and Oncologic Surgery, Medical University of Warsaw, 1a Banacha St, 02-097 Warsaw, 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	I-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)	1.00
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	30	1.00

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.W9	The structure of lipids and polysaccharides and their functions in cellular and extracellular structures
B.W15	Organ metabolism and the metabolic, biochemical and molecular basis of disease and therapy
B.W21.	Ageing processes and organ function changes associated with ageing;

B.U12	Use basic laboratory and molecular techniques.
C.W26	Pathogenesis of diseases, including genetic and environmental conditions;
C.W31	Major adverse drug effects, interactions and the problem of poly-pragmasy;
C.W39	Consequences of vitamin and mineral deficiencies and excesses;
C.W40	The causes and consequences of poor nutrition, including prolonged under- and over-eating and the use of unbalanced diets, and digestive and absorption disorders;
Skills– Graduate* is able to:	
D.W2	Concepts of health and illness, the influence of the social environment (family, work, social relations) and socio-cultural conditions (origin, social status, religion, nationality and ethnic group) on the patient's health;
D.U9	Describe and critically evaluate their own nutritional behavior and communication taking into account the possibility of alternative behavior
E.W1	Principles of natural feeding healthy child nutrition and obesity prevention and nutritional modifications due to illness
E.U1	Take a medical history of an adult, including an older person, using skills regarding the content, process and perception of communication, taking into account the biomedical perspective and the patient's perspective;
E.U19	Plan diagnostic, therapeutic and preventive procedures in the field of cancer treatment based on test results and provided medical documentation;
E.U21	Provide health education to the patient, including nutritional education tailored to individual needs;
G.W21	Epidemiology of cancer diseases, in particular their nutritional, environmental and other lifestyle conditions affecting oncological risk;

* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)	
Number of effect of learning	Effects in the fields of:
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.W15, C.W26, C.W39, C.W40, D.W2, D.U9, E.U19, E.U21, G.W21, K1, K2, K3, K4, K5, K7, K8, S1, S2, S3
Seminar 2 (e-learning)	*Regulation of hunger and satiety *Regulation of glycemia, insulin resistance and lifestyle factors	B.W9, B.W21, C.W26, C.W39, C.W40, D.W2, D.U9, E.U21, K1, K5, K8, S2, S3
Seminar 3 (e-learning)	Nutrients; food sources, bioavailability, effects of excess and deficiency of vitamins and minerals	B.W9, B.W15, B.W21, B.U12, C.W26, C.W31, C.W39, C.W40, D.W2, D.U9, E.U21, G.W21, K1, K2, K3, K4, K5, K6, K7, K8, S3
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.	B.U12, C.W31, C.W39, C.W40, D.W2, D.U9, E.U1, E.U19, E.U21, G.W21, K4, K7, K8, S1, S3
Seminar 5 (e-learning)	Nutritional metabolism; basal metabolic rate, total energy expenditure, food-induced thermogenesis, physical activity. spontaneous and unintentional physical expenditure	B.W9, B.U12, C.W40, D.W2, D.U9, E.W1, E.U21, K1, K4, K7, S3
Seminar 6 (e-learning)	The importance of diet in selected diet-related diseases. Dietary prevention (malnutrition, obesity, selected cardiovascular diseases, metabolic diseases and cancers)	B.W9, B.W15, C.W26, C.W39, C.W40, D.W2, D.U9, E.W1, E.W9, E.U1, E.U19, E.U21, G.W21, K1, K2, K3, K4, K5, K7, K8, S1, S2, S3
Seminar 7 (e-learning)	Healthy dietary alternatives. The role of antioxidants, superfoods, anti-aging nutrition.	B.W9, B.W21, C.W26, C.W31, C.W39, C.W40, D.W2, D.U9, E.U21, G.W21, K1, K3, K6, K7, S1, S2, S3
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	B.U12, C.W26, C.W31, C.W39, C.W40, D.W2, D.U9, E.W1, E.U21, K2, K5, K6, K7, S1, S3
Seminar 9 (e-learning)	Incorrect eating behaviors and other lifestyle factors, (alcohol, physical activity, sleep, social relations, behavior, interest, environment, mental health)	B.W21, C.W26, C.W31, C.W39, C.W40, D.W2, D.U9, E.W1, E.U1, E.U21, G.W21, K3, K5, K7, S3

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)	B.W9, B.W21, C.W26, C.W39, C.W40, D.W2, D.U9, E.W9, E.U1, E.U19, E.U21, G.W21, K1, K3, K5, K6, K8
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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. Wiley.
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
<i>B.W9, B.W15, B.W21, B.U12, C.W26, C.W31, CW. 39, C.W40, D.W2, D.U9, E.W1, E.U1, E.U19, E.U21, G.W21, K 1-8, S1-3</i>	On e-learning platform: quiz, test, written report	<ol style="list-style-type: none"> 1. Credit >60% of correct answers 2. >60% of correct answers of test and quiz

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 21/10/2024 till 26/01/2025 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