SZKOŁA GŁÓWNA GOSPODARSTWA WIEJSKIEGO

Environment, diet and health

Educational subject description sheet

Basic information

Field of study Food Science - Technology and Nutrition **Speciality** - **Organizational unit** Faculty of Food Technology **Study level** first cycle (bachelor's degree) **Study form** full-time studies **Education profile** General academic	**Didactic cycle** 2023/24 **Subject code** NoZTNS_D.110.04515.23 **Lecture languages** english **Mandatory** Elective subjects **Block** Major subjects **Disciplines** Food technology and nutrition

Coordinator	Ewelina Pałkowska-Goździk
Teacher	

Period Semester 5	**Examination** Pass with grade **Activities and hours** Lecture: 30 Auditorium exercises: 15	**Number of ECTS points** 3

Goals

Code	Goal
C1	The aim of the course is to provide current knowledge on the relationship between selected environmental factors, nutrition and human health. In addition, the aim of teaching is to shape pro-health behavior among students.

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	the important role of humans as a part of the environment and the effects of the environment on the human organism	TN_K1_W01, TN_K1_W02	Test (written or computer based)
W2	the role of the influence of selected environmental factors, nutrients in health and/or health disorders	TN_K1_W02, TN_K1_W03	Test (written or computer based)
W3	the role of the influence of environmental factors and nutrients on alterations in the organism's functioning	TN_K1_W02, TN_K1_W03	Test (written or computer based)
Skills – Student can:			
U1	search and critically analyze information regarding the components and/or contaminants of the environment on alterations in body function (i.e., on the functioning of various body systems)	TN_K1_U02	Report
U2	plan their own professional development by updating their knowledge of health-promoting attitudes	TN_K1_U04	Report
Social competences – Student is ready to:			
K1	conscious assessment of the impact of nutrition and environmental pollution as elements influencing human health and determining the development of pro-health attitudes	TN_K1_K01	Report

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Current state of knowledge on the influence of selected groups of products and biologically active substances presented in food and environmental factors (air pollution, nanoparticles, micro- and nanoplastics, chronic stress) on different systems of the human body and general health. Effects of physical activity on body function. Endocrine disruptors and hormonal homeostasis of the body - selected problems. Disturbances of circadian rhythms and their influence on human health.	W1, W2, W3	Lecture
2.	Analysis and presentation of literature data on topics including: the influence of diet composition on the body's energy metabolism, hormonal economy, functioning of the organism’s systems including nervous, digestive, circulatory under conditions of exposure to environmental factors (light pollution, smog, nanoparticles, micro- and nanoplastics, stress).	U1, U2, K1	Auditorium exercises

Course advanced

Activities	Methods of conducting classes

Activities	Methods of conducting classes
Lecture	Lecture, Problem lecture, Conversation lecture, Presentation
Auditorium exercises	Discussion, Brainstorm, Teamwork, Individual work

Activities	Examination method	Percentage
Lecture	Test (written or computer based)	50%
Auditorium exercises	Report	50%

Activities	Credit conditions
Lecture	In order to pass the lecture part of the course, it is necessary to obtain at least 51% of the possible points from the written test. The exam can be taken by a student who received a passing grade from the classes part of the course. The sum of points obtained from the exam will be transferred to the exercise grade, which will constitute 50% of the final grade for the course.
Auditorium exercises	In order to pass the auditorium exercises, it is necessary to obtain at least 51% of the possible points from the reports. The sum of points obtained from exercises will be transferred to the grade, which will constitute 50% of the final grade for the course.

Literature

Obligatory

1. WHO guidelines on physical activity and sedentary behavior, https://www.who.int/publications/i/item/9789240015128.
2. https://www.euro.who.int/en/health-topics/disease-prevention/nutrition/publications
3. publications related to lectures issues, published in e.g.: European Journal of Nutrition, International Journal of Environmental Research and Public Health, International Journal of Molecular Sciences, Nutrients, Nutrition Journal, Nutrition, Environmental Pollution, Science of the Total Environment

Calculation of ECTS points

Activity form	Activity hours*
Lecture	30
Auditorium exercises	15
Preparation for exercises	15
Preparation for the exam	30

Student workload	**Hours** 90
Number of ECTS points	**ECTS** 3

* hour means 45 minutes

Effects

Code	Content
TN_K1_K01	The graduate is ready to contact and exchange of experiences and knowledge with the experts in order to explore better solutions for particular problems connected to among others: food production, delivery chain, food storage and human nutrition
TN_K1_U02	The graduate can assess the composition, energy and nutritional value of food products, determine their impact on the growth, development, functioning and health of the body, assess the diet, and nutritional status, and use the obtained results to rationalize the nutrition of individuals and different population groups
TN_K1_U04	The graduate can analyze and evaluate the existing solutions appropriate for the food economy, identify problems and opportunities for professional activity, search for new solutions, and ways of their implementation using modern tools, including experiments, analytical methods, computer simulations, information and communication techniques, and others
TN_K1_W01	The graduate knows and understands theoretical issues in the field of biological, chemical, mathematical, and related sciences, which are the basis for the description of phenomena occurring in food and the human being body, used for its description
TN_K1_W02	The graduate knows and understands processes and phenomena occurring in the human being body in the nutrition process and the influence of food ingredients on the human being body and functions, importance and influence of food ingredients and energy value on the development and functioning of the human being body and their importance in ensuring public health
TN_K1_W03	The graduate knows and understands the composition and properties of raw materials, auxiliaries, food additives, and food industry products, the possibilities and conditions of use of them in food production, taking into account the principles of sustainable development and their impact on human health