



## Subject card

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                  |                                                          |                                                   |                                     |                                                                                                                      |            |     |
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| Subject name and code                       | Basis of Human Nutrition, PG_00054710                                                                                                                                                                                                                                                                                                                                                            |                                                          |                                                   |                                     |                                                                                                                      |            |     |
| Field of study                              | PODSTAWY ŻYWIENIA CZŁOWIEKA                                                                                                                                                                                                                                                                                                                                                                      |                                                          |                                                   |                                     |                                                                                                                      |            |     |
| Date of commencement of studies             | October 2024                                                                                                                                                                                                                                                                                                                                                                                     |                                                          | Academic year of realisation of subject           |                                     | 2025/2026                                                                                                            |            |     |
| Education level                             | first-cycle studies                                                                                                                                                                                                                                                                                                                                                                              |                                                          | Subject group                                     |                                     | Obligatory subject group in the field of study<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | Full-time studies                                                                                                                                                                                                                                                                                                                                                                                |                                                          | Mode of delivery                                  |                                     | at the university                                                                                                    |            |     |
| Year of study                               | 2                                                                                                                                                                                                                                                                                                                                                                                                |                                                          | Language of instruction                           |                                     | Polish                                                                                                               |            |     |
| Semester of study                           | 4                                                                                                                                                                                                                                                                                                                                                                                                |                                                          | ECTS credits                                      |                                     | 2.0                                                                                                                  |            |     |
| Learning profile                            | general academic profile                                                                                                                                                                                                                                                                                                                                                                         |                                                          | Assessment form                                   |                                     | assessment                                                                                                           |            |     |
| Conducting unit                             | Department of Chemistry Technology and Biotechnology of Food -> Faculty of Chemistry -> Wydział Politechniki Gdańskiej                                                                                                                                                                                                                                                                           |                                                          |                                                   |                                     |                                                                                                                      |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                                                                                                                                                               |                                                          | prof. dr hab. inż. Agnieszka Bartoszek-Pączkowska |                                     |                                                                                                                      |            |     |
|                                             | Teachers                                                                                                                                                                                                                                                                                                                                                                                         |                                                          |                                                   |                                     |                                                                                                                      |            |     |
| Lesson types                                | Lesson type                                                                                                                                                                                                                                                                                                                                                                                      | Lecture                                                  | Tutorial                                          | Laboratory                          | Project                                                                                                              | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                                                                                                                                                            | 15.0                                                     | 0.0                                               | 15.0                                | 0.0                                                                                                                  | 0.0        | 30  |
|                                             | E-learning hours included: 0.0                                                                                                                                                                                                                                                                                                                                                                   |                                                          |                                                   |                                     |                                                                                                                      |            |     |
| Learning activity and number of study hours | Learning activity                                                                                                                                                                                                                                                                                                                                                                                | Participation in didactic classes included in study plan |                                                   | Participation in consultation hours |                                                                                                                      | Self-study | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                                                                                                                                                            | 30                                                       |                                                   | 2.0                                 |                                                                                                                      | 18.0       | 50  |
| Subject objectives                          | Lectures on Basics of Human Nutrition are aimed at familiarising students with the basic concepts and definitions concerning food and its impact on human organism. The emphasis is placed on parameters and nutritional norms that must be known to food producers, to whom graduates of biotechnology disciplines belong. The role of food components for consumers' health is also discussed. |                                                          |                                                   |                                     |                                                                                                                      |            |     |

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| Learning outcomes               | Course outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Subject outcome                                                                                                                                                                                                                                                                                                                                  | Method of verification                                                                                                     |
|                                 | K6_W09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Students knows how the sensory assessment of foods is performed. Student learns how the digestibility of foods id assessed. Student learns how to extract and to assess the quality of fats isolated from foodstuffs. Student knows a method of food antioxidant activity assessment.                                                            | [SW1] Ocena wiedzy faktograficznej                                                                                         |
|                                 | K6_W05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Student understands what role plays food and nutrition in the development and prevention of diseases as well as in the proper development of newborns and infants. Student has the knowledge on future foods such as e.g. food for space flights.                                                                                                | [SW1] Ocena wiedzy faktograficznej                                                                                         |
|                                 | K6_U01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Student learns about basic terms and definitions applied in food and nutrition sciences. Student understands the significance of nutritional norms and their practical applications.                                                                                                                                                             | [SU2] Ocena umiejętności analizy informacji<br>[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu |
|                                 | K6_U09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Student learns about food significance for wellbeing in the evolutionary context and understands the importance of individual food components for organism's function. Student recognises basic mechanisms of food digestion and utilisation of food components in human organism.                                                               | [SU2] Ocena umiejętności analizy informacji<br>[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu |
| Subject contents                | <p>Course content – lecture</p> <p>Basic definitions applied in the food and nutrition sciences.</p> <p>Nutritional and toxicological norms.</p> <p>The significance of nutrition in the development and prevention of diseases as well as in the proper development of newborns and infants.</p> <p>The methodology of sensory analysis taking alcohol free beer as an example. The observation of nutrients release from food products in the presence and absence of digesting enzymes. Isolation and quality assessment of fats isolated from foodstuffs. The determination of antioxidant for selected food items by FRAP test.</p> |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |
| Prerequisites and co-requisites | The basic competence in chemistry, in particular in the area of thermodynamics and chemical analysis. The acquaintance of basic laboratory skills.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |
| Assessment methods and criteria | Subject passing criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Passing threshold                                                                                                                                                                                                                                                                                                                                | Percentage of the final grade                                                                                              |
|                                 | Lecture - written exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 50.0%                                                                                                                                                                                                                                                                                                                                            | 70.0%                                                                                                                      |
|                                 | Laboratory - entry test and report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 50.0%                                                                                                                                                                                                                                                                                                                                            | 30.0%                                                                                                                      |
| Recommended reading             | Basic literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>"Żywnie człowieka" Tom 1. Podstawy Nauki o Żywieniu, pod redakcją Jana Gawędzkiego, PWN 2022.</p> <p>"Norma Żywnienia dla Populacji Polski i ich zastosowanie" pod redakcją Mirosława Jarosza, Ewy Rychlik, Katarzyny Stoś, i Jadwigi Charzewskiej, Narodowego Instytutu Zdrowia Publicznego Państwowego Zakładu Higieny (NIZP-PZH), 2020</p> |                                                                                                                            |
|                                 | Supplementary literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Scientific literature on the subject.                                                                                                                                                                                                                                                                                                            |                                                                                                                            |
|                                 | eResources addresses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |

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| Example issues/<br>example questions/<br>tasks being completed | <p>What is a nutrient by definition.</p> <p>On what depends the protein requirement according to nutritional norms.</p> <p>What the names probiotics and probiotics describe? Discuss their role in nutrition.</p> <p>Discuss the major recommendations in newborns' nutrition.</p> <p>How it is performed and what is the aim of sensory analysis of foodstuffs?</p> |
| Practical activities within<br>the subject                     | Not applicable                                                                                                                                                                                                                                                                                                                                                        |

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