**Karta opisu zajęć (sylabus)**

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| Nazwa kierunku studiów | Bezpieczeństwo i certyfikacja żywności |
| Nazwa modułu, także nazwa w języku angielskim | Bases of human nutrition /Podstawy żywienia człowieka |
| Język wykładowy | English/ angielski |
| Rodzaj modułu | mandatory / obowiązkowy |
| Poziom studiów | bachelor degree / pierwszego stopnia |
| Forma studiów | stationary / stacjonarne |
| Rok studiów dla kierunku | III |
| Semestr dla kierunku | 5 |
| Liczba punktów ECTS z podziałem na kontaktowe/niekontaktowe | 6 (3,08/2,92) |
| Tytuł naukowy/stopień naukowy, imię i nazwisko osoby odpowiedzialnej za moduł | Dr inż. Edyta Kowalczuk-Vasilev |
| Jednostka oferująca moduł | Zakład Fizjologii Żywienia i Bromatologii  Instytut Żywienia Zwierząt i Bromatologii |
| Cel modułu | The purpose of the module is to familiarize students with the role of food components in human nutrition, the nutritional value of products and foods, current nutritional standards and recommendations, and the importance of nutrition in population health prevention. To develop the ability to make decisions about proper nutrition and to critically evaluate the ways of human nutrition. |
| Efekty uczenia się dla modułu to opis zasobu wiedzy, umiejętności i kompetencji społecznych, które student osiągnie po zrealizowaniu zajęć. | Knowledge / Wiedza: |
| 1. Student has knowledge of nutrient transformations and their effects on the human body. |
| 2. Student knows the nutritional value of products and foods and the current guidelines related to rational nutrition and diet therapy of selected disease entities. |
| 3. Student is familiar with the principles of proper nutrition of different groups of the population and the dangers of improper nutrition. |
| Skills / Umiejętności: |
| 1. Student can calculate the body's energy requirements and plan nutrition for specific population groups and in selected disease entities. |
| 2. Student is able to carry out an assessment of food intake in relation to current standards and recommendations and make advice on rational nutrition. |
| Social competencies / Kompetencje społeczne: |
| 1. Student uses knowledge in the process of self-education in the field of healthy and rational nutrition. |
| 2. Student undertakes independent data preparation and interpretation of results. |
| Odniesienie modułowych efektów uczenia się do kierunkowych efektów uczenia się / Relation of module learning outcomes to the field learning outcomes | Kod efektu modułowego – kod efektu kierunkowego / Code for the module effect - code for the field effect:  W1 – BC1 \_W07  W2 - BC1 \_W07, BC1 \_W10  W3 - BC1\_W01  U1 – BC1\_U04  U2 – BC1 \_U04, BC1 \_U06, BC1 \_U07  K1 - BC1 \_K01, BC1 \_K05  K2 - BC1 \_K03 |
| Odniesienie modułowych efektów uczenia się do efektów inżynierskich (jeżeli dotyczy) / Relation of module learning outcomes to engineering outcomes (if applicable) | Kod efektu modułowego – kod efektu inżynierskiego  Code for the module effect - code for the engineer effect code:  W1 W2 W3 – InzBC\_W05  U1 – InzBC\_U02  U2 – InzBC\_U01 |
| Wymagania wstępne i dodatkowe / Prerequisites | Zaliczenie z przedmiotów: chemia żywności, fizjologia zwierząt i człowieka, biochemia ogólna i żywności, metody oceny żywności.  Completion of the following courses: Food Chemistry, Animal and Human Physiology, General and Food Biochemistry, Food Evaluation Methods. |
| Treści programowe modułu / Course content | Nutrients, nutritive and non-nutritive components. Digestion of proteins, fats and carbohydrates, absorption and metabolism of these components. Vitamins and minerals in nutrition: division, functions, effects of deficiency and excess, occurrence in food. Dietary fiber. Metabolism and energy in man, energy balance of the body. Nutrient requirements, and nutrition standards and guidelines. Principles of nutrition of different population groups and in selected disease entities. Food enrichment and dietary supplementation with nutrients as strategies to rationalize nutrition. |
| Wykaz literatury podstawowej i uzupełniającej/ References | *Literatura podstawowa / Reference literature:*  Preedy et al. (2013) Handbook of nutrition, diet and the sleep. Wageningen : Wageningen Academic Publishers, 2013  D’Mello J.P.F. (2012) Amino acids in human nutrition and health. Wallingford ; Cambridge, MA : CABI, 2012  Terry L.A (2011) Health-promoting properties of fruits and vegetables. Wallingford ; Cambridge, MA : CABI, 2011  Kamp J.W. (2010) Dietary fibre : new frontiers for food and health. Wageningen : Wageningen Academic Publishers, 2010  *Literatura uzupełniająca /* *Supplementary literature:*  materials and literature provided by the lecturer |
| Planowane formy/działania/metody dydaktyczne / Teaching methods | Metody dydaktyczne / Didactic methods: lecture, auditory exercises (lecture, multimedia demonstration), laboratory exercises in the computer lab (calculation exercises, use of dietary programs, development of dietary assessment results using the Office package, implementation of the customary diet assessment project).  Considering teaching and learning using distance education methods and techniques and the resulting considerations. |
| Sposoby weryfikacji oraz formy dokumentowania osiągniętych efektów uczenia się / Assessment methods | SPOSOBY WERYFIKACJI / VERIFICATION METHODS:  **W1 W2 W3** – written exam, project assessment  **U1 U2 K1 K2** - tasks done individually, planning of diets, evaluation of the project done individually (nutrition assessment project)  FORMY DOKUMENTOWANIA OSIĄGNIĘTYCH EFEKTÓW UCZENIA SIĘ / FORMS OF DOCUMENTING THE ACHIEVED LEARNING OUTCOMES:  Tasks, projects - archived in paper or digital form.  Lecturer's journal - archived in paper form  Written exam - archived in paper form.  **Szczegółowe kryteria przy ocenie zaliczenia i prac kontrolnych / Detailed criteria in the evaluation of credit and control works**   * a student demonstrates a sufficient (3.0) degree of knowledge, skills or competence when he/she obtains from 51 to 60% of the sum of points determining the maximum level of knowledge or skills in a given subject (respectively, with partial credit - its part), * a student demonstrates a sufficient plus (3.5) degree of knowledge, skills or competence when he/she obtains from 61 to 70% of the sum of points determining the maximum level of knowledge or skills in a given subject (respectively - its parts), * a student demonstrates a good degree (4.0) of knowledge, skills or competence when he/she obtains from 71 to 80% of the sum of points determining the maximum level of knowledge or skills in a given subject (respectively - its parts), * a student demonstrates a plus good degree (4.5) of knowledge, skills or competence when he/she obtains from 81 to 90% of the sum of points determining the maximum level of knowledge or skills in a given subject (respectively - its parts), * a student demonstrates a very good degree (5.0) of knowledge, skills or competence when he/she obtains more than 91% of the sum of points determining the maximum level of knowledge or skills in a given subject (respectively - its part). |
| Elementy i wagi mające wpływ na ocenę końcową / Assessment methods | The final grade is influenced by the average grade from the exercises (40%), including the grade from the projects, student activity (10%) and the grade from the final assessment (50%).  Exercise grade = evaluation of practical tasks and activity 30% + evaluation of project 70%  The conditions for completing the course are presented in the first class of the module. |
| Bilans punktów ECTS / ECTS credits | Formy zajęć / Forms of activities:  **Kontaktowe / Contact hours:**   * participation in lectures (25 h / 1 ECTS), * participation in the auditory and laboratory classes (45 h / 1,8 ECTS), * exam (2 h / 0,08 ECTS), * participation in consultations (5 h / 0,2 ECTS),   Total – 77 h / 3,08 ECTS  **Niekontaktowe / Non-contact hours:**   * preparation for classes (10 h / 0,4 ECTS), * studying literature (13 h / 0,52 ECTS), * project preparation (25 h / 1 ECTS), * exam preparation (25 h / 1 ECTS)   Total: 73 h / 2,92 ECTS |
| Nakład pracy związany z zajęciami wymagającymi bezpośredniego udziału nauczyciela akademickiego / The workload related to the activities requiring direct participation of lecturer | Participation in lectures – 25 h;  Participation in the auditory and laboratory classes – 45 h;  Participation in consultations – 5 h;  Exam – 2 h  Total: 77 h |