M uu_uu	BC1s_041
The field or fields of study	Food safety and certification
The name of education module	Bases of human nutrition
Language of lecture	English
Type of education module (obligatory / optional)	Obligatory
The level of the education module	I
Year of studies	III
Semester	5
The number of ECTS points divided into contact/noncontact	5 3,2/2,8
Title / degree, name and surname of the responsible person	Prof. dr hab. Eugeniusz R. Grela
Co-responsible persons	Dr inż. Edyta Kowalczuk-Vasilev, dr inż. Wioletta Samolińka
The entity offering the subject	Institute of Animal Nutrition and Bromatology
The aim of the module	The aim of the module is to familiarize students with the physiology of human nutrition and its role in the prevention of the health of the population, the role of food ingredients in human nutrition, standards and recommended dietary and nutritional products and dishes. Developing the ability to make decisions about proper nutrition and how to critically assess human nutrition.
The content of education module - compact description of approx. 100 words.	Physiological basis of human nutrition. Nutrients, food and diet. Digestion of proteins, fats and sugars, absorption and metabolism of these compounds. The role and metabolism of fatty acids and cholesterol in the body. Dietary fiber. Vitamins, the role and effects of shortages and excess vitamins. Minerals in nutrition: the division of functions, the effects of shortages and surpluses, occurrence in food, nutrition in diseases of deficiency. The transformation of matter and energy in the human energy balance. Nutrient requirements and standards of nutrition and nutrition. Principles of feeding different population groups. Enrichment of foods and dietary supplementation of nutrients, as a strategy to rationalize nutrition. Nutrigenomics and intelligent feeding people. Nanotechnology in food production.
Recommended books or obligatory books	1.Gawęcki J,. Hryniewiecki L. (red.): Żywienie człowieka. Podstawy nauki o żywieniu. PWN, Warszawa 2006, 2009. 2.Roszkowski W. (red.): Podstawy nauki o żywieniu człowieka. Przewodnik do ćwiczeń. Wydawnictwo SGGW, Warszawa 2005 1.Keller J.S.: Podstawy fizjologii żywienia człowieka. SGGW Warszawa 2000. 2.Jarosz M., Bułhak-Jachymczyk B.(red.): Normy żywienia człowieka. Podstawy prewencji otyłości i chorób niezakaźnych. PZWL, Warszawa 2008. 3.Gronowska-Senger A.: Zarys oceny żywienia, Wyd. SGGW, Warszawa 2009. 4.Gawęcki J., Roszkowski W. (red.): Żywienie człowieka a zdrowie publiczne. Wydawnictwo Naukowe PWN, Warszawa 2009. 5.Kunachowicz H., Nadolna I., Przygoda B., Iwanow K.: Tabele składu i wartości odżywczej żywności. Wyd. Lekarskie PZWL, Warszawa 2005. 6.Wills J.: Biblia żywności i żywienia. Amber, Warszawa, 1998.
Planned forms / activities / teaching methods	1) exercise in the form of computer classes with nutrition programs 2) laboratory and auditorium classes combined with a discussion, 3) the execution and defense of the project diet or food ration, 4) lectures - presentations in Powerpoint