Description of learning outcomes

Name of the field of study:
FOOD TECHNOLOGY AND HUMAN NUTRITION

Level of study:
FIRST-CYCLE studies

Study profile:
GENERAL ACADEMIC

Scientific discipline to which the learning outcomes apply:
field of science AGRICULTURAL SCIENCES
discipline of science FOOD AND HUTRITION TECHNOLOGY

The description of learning outcomes takes into account the universal characteristics of the first degree for level 6 specified in the Act of 22 December 2015 on the Integrated Qualifications System (Journal of Laws of 2016, items 64 and 1010, as amended) and the characteristics of the second degree learning outcomes for level 6 qualifications specified in the regulations issued on the basis of Art. 7 sec. 3 of this Act.

Description of learning outcomes for qualifications at level 6 of the Polish Qualifications Framework

Learning outcomes symbols for the field of study	Directional learning outcomes	Reference to the characteristics of the second degree of PRK
	KNOWLEDGE **a graduate knows and understands:**	
TZ1A_W01	issues in the fields of chemistry, biochemistry, biology, and related sciences at an advanced level, within a scope adapted to the needs of the profession of a food technologist and human nutrition specialist.	P6S_WG
TZ1A_W02	issues in the fields of biophysics, mathematics, and related sciences at an advanced level, within a scope adapted to the needs of the profession of a food technologist and human nutritionist.	P6S_WG
TZ1A_W03	the economic, technical, ecological, ethical, legal, and social aspects of food production, including the organization of production processes and economic activity, as well as the principles of intellectual and industrial property protection.	P6S_WK
TZ1A_W04	the principles governing technological processes, technological operations, and unit processes at an advanced level in sustainable food production, including knowledge of process parameters, understanding of cause-and-effect relationships between them, and familiarity with process control techniques and research tools used in food technology.	P6S_WG
TZ1A_W05	issues related to the chemical composition of raw materials and food products, microorganisms, the properties of food ingredients,	P6S_WG

	and the mechanisms of their transformations and interactions in the context of food safety and quality.	
TZ1A_W06	the impact of the storage methods, processing parameters (technological process parameters) on the properties and quality of raw materials used in production and of finished products, including their nutritional value and food safety	P6S_WG
TZ1A_W07	the principles of planning and implementing project work related to food products and technological processes, taking into account factors relevant to food safety and quality at the enterprise level and within the bioeconomy sector.	P6S_WG P6S_WK
TZ1A_W08	issues related to the systemic management of food quality and safety in the food supply chain, taking into account current legal, social, and economic conditions.	P6S_WK
TZ1A_W09	the basic principles of designing production systems and organizing work in a food enterprise, taking into account the principles of ergonomics as well as sanitary and hygienic requirements in food production and their impact on food quality and safety.	P6S_WK
TZ1A_W10	issues related to the composition, energy value, and nutritional value of food products and the factors shaping them, including technological and storage processes, as well as the role of nutrients in proper human nutrition and the processes of digestion, absorption, and metabolism of nutrients in the human body.	P6S_WG
	SKILLS **a graduate is able to:**	
TZ1A_U01	use a foreign language at the B2 level of the Common European Framework of Reference for Languages (CEFR), communicate orally and in writing in a foreign language using specialist terminology, and read and understand uncomplicated specialist texts.	P6S_UW P6S_UK P6S_UU
TZ1A_U02	conduct research on food and technological processes using standard research methods and measurement equipment; plan and carry out a standard research task (experiment) related to the assessment of food quality (raw materials, products), document it, interpret the results, and formulate conclusions.	P6S_UW P6S_UO
TZ1A_U03	independently design a food product and a technological process, develop documentation for a quality assurance system, identify and assess the impact of technological processes (phenomena) on the product, prepare—using information technologies—specifications, procedures, and instructions concerning sustainable food production and nutrition, and assess food intake as well as the composition, energy value, and nutritional value of food.	P6S_UW P6S_UK
TZ1A_U04	plan, perform, and supervise complex technological processes and operations in conditions that are not fully predictable; control the production process and parameters; and take appropriate actions to identify and manage the effects and causes of non-conformities while solving complex and unusual technological problems.	P6S_UW P6S_UO P6S_UK
	SOCIAL COMPETENCE **a graduate is ready to:**	
TZ1A_K01	continuously deepen and update their knowledge and skills, critically evaluate them, pursue further education and professional development, share knowledge, and undergo procedures verifying competencies and skills in the field of food technology and nutrition.	P6S_KK

TZ1A_K02	work in a team, communicate and cooperate while taking the role of either a team member or a leader, taking into account criteria and priorities related to food technology and nutrition.	P6S_KR
TZ1A_K03	assume social, professional, and ethical responsibility for the quality of produced food, including planning and independently undertaking long-term actions aimed at its improvement;	P6S_KR P6S_KK
TZ1A_K04	cultivate best practices in conscious and responsible influence on food production and human nutrition, taking into account current social and legal aspects, environmental protection, food safety, and food security.	P6S_KO P6S_KR