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Bachelor study program

Characteristics of the study program	
Name of the study program	**Agro-food industry**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3 academic years
Language of study	Slovak language
Awarded academic title	Bachelor (abbreviation Bc.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/ing-studijne-programy/
Study objectives in the study program	The aim of the study is to acquire professional knowledge, skills and competences in the field of basic technological operations in food production and processes that are important for ensuring food production.
Profile of a graduate of the study program	The graduate will know the factors influencing the formation of production quality, including genotype, growing environment, cultivation technology and livestock breeding. He will gain knowledge about biochemical, chemical and physical changes, processes taking place in agricultural products both during their creation and during post-harvest treatment and storage. It can handle modern methods of storage (custody) of agricultural products and food in terms of quality and economy. Can evaluate and analyse raw materials and food from various aspects of quality in accordance with the Slovak Food Act and international standards. He will become familiar with the possibilities of processing and finalizing agricultural production and its more profitable monetization. He can continue his studies in the "Food Technology" engineering program or in another related study program.
Knowledge	- describe and identify basic processes from inorganic and organic chemistry, - describe and identify the agro ecological conditions of growing plants in relation to their future quality and safety - select and identify the physiological processes of meat, milk and egg production in relation to their quality and safety, - describe and explain the physical properties of food, - determine and reproduce knowledge from the morphology and biology of animals, - determine and reproduce knowledge from the biology of plant production, - name the factors affecting the health and well-being of animals on the quality of their production, - name and interpret processes from analytical chemistry, - define storage conditions and their impact on product quality and safety, - define the conditions of growth and reproduction microorganisms in food, - list and determine the procedures for evaluating the production of raw materials and food of plant and animal origin, - define and determine biochemical processes affecting food

	quality, - define and determine the conditions and restrictions for the storage of food of plant origin, - define and describe food labelling and packaging procedures, - define and describe methods of evaluation of raw materials and foods of plant and animal origin, - have knowledge of physical processes and principles of processing technologies, - know and identify the environmental aspects of food production and raw materials, - know and identify the nutritional value of food, - define and describe food hygiene control methods, - select and determine the methods of analysis of biologically active substances in food. - know and identify the legislative and legal aspects of the production of raw materials and food, - know and identify knowledge from food quality management and food marketing,
Skills	- apply modern laboratory methods and devices for evaluating the quality parameters of raw materials and food and interpret the results correctly, - interpret the causes of unsatisfactory quality and propose measures to eliminate them, sort raw materials for different ways of use, - organize work operations in the field of post-harvest treatment and storage of raw materials and food and in the field of supplier-customer relations, - apply basic knowledge for business activity and for application in the field of marketing in food production and trade - demonstrate problems and their solutions at professional and educational events, - apply new knowledge in innovation teams - apply the principles of healthy nutrition in the development of new or modified products, - use and apply the latest theoretical knowledge and legislation.
Competences	- evaluate input raw materials, their quality and safety, - organize the purchase of raw materials, - manage raw material treatment processes before and during technological processing, - apply the principles of hygiene and sanitation, - practice food packaging and labelling systems, - evaluate the quality of produced food, - apply the principles of good production and hygiene practices, - compare the advantages and disadvantages of technological production procedures, - interpret the procedures for making nutritional and health claims about foods, - apply the principles of metrology and legislation, - control the output control systems of food production.
Application of graduates	Graduates apply:

	In food businesses and joint-stock companies - mainly in the area of purchasing, storage and quality assessment of raw materials and products. In agricultural enterprises of various forms, especially with the implementation of production processing, in service enterprises, control institutions, insurance industry and organizations for internal and international trade in agricultural products and food.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Min. the number of credits obtained in the first semester for advancement to further studies	6
Duration of the examination period	From 15.12. of the calendar year until 31.7. of the following calendar year
Conditions for admission to study	Criteria for evaluating applicants for study at the first level of study a) point assessment of matriculation exams (maximum 40 points) b) point evaluation of the results achieved during secondary school studies, including the results of the matriculation exam in the subjects of chemistry and biology (maximum 40 points, of which a maximum of 20 points for chemistry and a maximum of 20 points for biology). By adding up the two point values (a + b), the resulting point evaluation will be obtained, on the basis of which the order of applicants for study at the first degree within the individual study programs will be compiled.
Continuity to other types of study programs (1st and 2nd level of study)	After completing the engineering studies, the graduate has the opportunity to continue his studies in the 3rd degree of higher education in the Food Technology study program

Study obligations	The condition for proper completion of studies is the acquisition of 120 credits, including credits for the preparation and defence of the diploma thesis. Other conditions that the student must fulfil during the study of the study program and for its proper completion, including the conditions of state exams, rules for repeating studies and rules for extending and interrupting studies, are listed in Art. 13, 14, 15, 16, 17, 18, 19, 21, 23, of the internal regulations Study regulations of the SPU in Nitra
Mandatory study components	Bachelor thesis Practice
Compulsory subjects	***Compulsory subjects*** 1. Inorganic chemistry 2. Biophysics and physical properties of food 3. Biological aspects of animal and plant production 4. Mathematics 5. Organic chemistry 6. Biochemistry 7. Integrated livestock production 8. Integrated plant production 9. Analytical chemistry 10. Biologically active food components 11. Microbiology 12. Seminar on bachelor's thesis I. 13. Bachelor internship 14. Food packaging and labelling 15. Evaluation of raw materials and foods of animal origin 16. Storage of plant products 17. Bachelor thesis 18. Basics of agricultural food production 19. Evaluation of raw materials and foods of plant origin 20. Food hygiene 21. Seminar on bachelor's thesis II.
Optional subjects	***Compulsory elective subjects*** 1. Information resources in biology, biotechnology and food industry 2. Foreign language 3. Seminar on inorganic chemistry 4. Introduction to the study 5. Animal protection and food production 6. Seminar on bachelor's practice 7. Seminar on organic chemistry 8. Morphology of vertebrates 9. Physiology of plants 10. Sensory analysis of food 11. Epidemiology and food allergies 12. Chemical toxicology 13. Basics of biological safety 14. Basics of food technologies 15. Food quality management

	16. Sanitation in the food industry
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Student scientific conference

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Bachelor study program

Characteristics of the study program	
Name of the study program	**Food safety and control**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3 academic years
Language of study	Slovak language
Awarded academic title	Bachelor (abbreviation Bc.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/ing-studijne-programy/
Study objectives in the study program	The graduate masters the issue of general hygiene requirements for the conditions that food businesses, warehouses and stores must meet, special hygiene requirements for the hygiene of the production of individual foods, the hygiene of storage, transportation and sale of food. He also controls the basic legislative requirements in terms of food legislation of the Slovak Republic and the EU, the HACCP system, sanitation program, metrology program, ISO standards, food quality and safety standards, epidemiology and prevention of foodborne diseases and allergies from food and principles of good hygienic practice.
Profile of a graduate of the study program	Based on completion of compulsory and compulsory optional subjects of the study plan graduate: - acquires and understands the principles of the internal (company) system of hygiene and control and food safety, - acquires knowledge about the principles of developing the HACCP system, keeping documentation, verifying and proposing corrective measures and verification in the HACCP system, - becomes thoroughly familiar with the principles of sanitation, compiling a sanitation program, the selection of sanitation means and methods of evaluating the effectiveness of sanitation, - is able to ensure hygiene minimum training for workers, control compliance with the hygienic condition of establishments, means of transport and compliance hygiene principles by workers, - develops and is responsible for the metrology program, application of ISO norms and standards of food quality and safety (ISO 22000), - updates reviews and specifications for used auxiliary raw materials, packaging and a cleaning and disinfecting agent, - uses modern laboratory methods and devices for food inspection, control hygiene and sanitation, to control the presence of allergens in food, - analyses the causes of unsatisfactory hygienic conditions, microbial contamination, spread of alimentary diseases, non-maintenance of control at critical points in production,

	- organizes work operations in the area of ensuring sanitation and hygiene, metrology, risk analysis, designing corrective measures, HACCP system verification, validation and verification of processes, documentation management.
Knowledge	- describe and identify basic processes from inorganic and organic chemistry, - select and identify biological processes in plant and animal organisms in relation to the quality and safety of production, - describe and explain the physical properties of food, - determine and reproduce knowledge from the biology of plant and animal production, - name the factors affecting the health and well-being of animals on the quality of their production, - name and interpret processes from analytical chemistry, - define the conditions for the growth and reproduction of microorganisms in raw materials and food, - describe the factors of the impact of technology on the quality and safety of food, - determine and rank risks affecting the safety of raw materials and food, - list and determine the procedures for evaluating the production of raw materials and food of plant and animal origin, - define and determine biochemical processes affecting food quality, - define and determine the conditions for the emergence of the epidemiological process and food allergies, - define and describe food labelling and packaging procedures, - define and describe methods of evaluation of raw materials and foods of plant and animal origin, - define and describe food hygiene control methods, - select and determine sanitation methods in the food industry, - determine factors decisive for the hygiene of food distribution and sale, - describe the principles of good production and hygiene practice, - select and reproduce sensory analysis procedures for food.
Skills	- apply modern laboratory procedures and methods to control the level of hygiene in the food industry, - interpret the causes of inadequate environmental hygiene, personal hygiene and hygiene of raw materials and food, - organize activities related to disinfection, disinsection and extermination in the food industry, - apply basic knowledge for business activity and for application in the field of food safety and control, - demonstrate problems and their solutions at professional and educational events, - apply new knowledge and methods of food control, processes and technologies, - use and apply the latest theoretical knowledge and legislation. - use and apply elements of automation and digitization in the food industry, - use and apply software solutions in the food industry.
Competences	- manage the internal system of hygiene, control and food safety,

	- create and manage the HACCP system, including keeping documentation, verifying and proposing corrective measures and its verification, - ensure hygiene minimum training for workers, control of compliance with the hygienic condition of establishments, compliance with the hygiene of means of transport, - compile and be responsible for the metrology program, application of ISO standards and food quality and safety standards, - formulate assessments and specifications for auxiliary raw materials, packaging and disinfectants used, - set up the use of modern laboratory methods and devices for food inspection, hygiene and sanitation control, for checking the presence of allergens and foreign particles in food, - analyse the causes of inadequate hygienic conditions, microbial contamination, the spread of foodborne diseases, non-compliance with control at critical points in production, - organize work operations in the area of ensuring sanitation and hygiene, metrology, risk analysis, proposing corrective measures, HACCP system verification, process validation and verification, documentation management.
Application of graduates	Graduates will be employed in food businesses, in the sale and distribution of food as managers for hygiene and sanitation, managers for risk management or. managers for control food. They can also be used in companies dealing with sanitation and extermination in the food industry, in consulting and consulting firms dealing with the HACCP system, the introduction of ISO standards, the application of legislation and food quality and safety standards, and food safety management systems. They will find further application in food education, food research, private educational facilities and consultation and advisory centre's, accredited laboratories, company laboratories and company control.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Min. the number of credits obtained in the first semester	6

for advancement to further studies	
Duration of the examination period	From 15.12. of the calendar year until 31.7. of the following calendar year
Conditions for admission to study	Criteria for evaluating applicants for study at the first level of study a) point assessment of matriculation exams (maximum 40 points) b) point evaluation of the results achieved during secondary school studies, including the results of the matriculation exam in the subjects of chemistry and biology (maximum 40 points, of which a maximum of 20 points for chemistry and a maximum of 20 points for biology). By adding up the two point values (a + b), the resulting point evaluation will be obtained, on the basis of which the order of applicants for study at the first degree within the individual study programs will be compiled.
Continuity to other types of study programs (1st and 2nd level of study)	After completing the engineering studies, the graduate has the opportunity to continue his studies in the 3rd degree of higher education in the Food Technology study program
Study obligations	The condition for proper completion of studies is the acquisition of 120 credits, including credits for the preparation and defense of the diploma thesis. Other conditions that the student must fulfil during the study of the study program and for its proper completion, including the conditions of state exams, rules for repeating studies and rules for extending and interrupting studies, are listed in Art. 13, 14, 15, 16, 17, 18, 19, 21, 23, of the internal regulations Study regulations of the SPU in Nitra
Mandatory study components	Bachelor thesis Practice
Compulsory subjects	***Compulsory subjects*** 1. Inorganic chemistry 2. Biological aspects of animal and plant production 3. Mathematics 4. Organic chemistry 5. Public health and food production 6. Biochemistry 7. Microbiology 8. Risks in food production 9. General food hygiene 10. Analytical chemistry 11. Sensory analysis of food 12. Bachelor internship 13. Seminar on bachelor's thesis I. 14. Methods of microbiological food testing 15. Epidemiology and food allergies 16. Evaluation of raw materials and foods of animal origin

	17. Hygiene of food distribution and sale 18. Predictive microbiology in the food industry 19. Sanitation in the food industry 20. Bachelor thesis 21. Evaluation of raw materials and foods of plant origin 22. Food hygiene
Optional subjects	***Compulsory elective subjects*** 1. Biophysics and physical properties of food 2. Information resources in biology, biotechnology and food industry 3. Biological analyses I. 4. Foreign language 5. Seminar on inorganic chemistry 6. Introduction to the study 7. Animal protection and food production 8. Basics of food processing and storage 9. Seminar on bachelor practice 10. Seminar on organic chemistry 11. Biophysical chemistry 12. Biostatistics 13. Basics of food technology 14. Basics of economics 15. Biological analyses II. 16. Food packaging and labelling 17. Correct hygienic practice in the food industry 18. Basics of agricultural food production
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Student scientific conference

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Bachelor study program

Characteristics of the study program	
Name of the study program	**Food safety and control**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	2 academic years
Language of study	Slovak language/ English language
Awarded academic title	Engineer (abbreviation Ing.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/ing-studijne-programy/
Study objectives in the study program	The aim of the study is to master the principles of microbiological and chemical food safety both horizontally and vertically, applying an integrated approach from farm to table and from table to farm. It ensures and manages the traceability of food, the evaluation of information and its analysis from the rapid warning system and the withdrawal of products from the market. It applies, develops and evaluates a system of risk analysis with the use of mathematical and predictive models in the sense of the preventive principle in order to protect people's health and communicate about the safety of produced food.
Profile of a graduate of the study program	Based on completion of compulsory and compulsory optional subjects of the study plan, the graduate: - obtains and applies the principles of traceability of raw materials and food in the entire chain of their production and applies them to the specific conditions of a food business, - acquires and applies knowledge about the strategy of risk analysis on a scientific basis in the sense of evaluation of management and communication, - applies knowledge of mathematical models, statistical evaluation of phenomena and their application in management work, - uses modern analytical methods to control food, to authenticate it, or forgery, - expertly comments on draft legislation, based on it, proposes changes, e.g. in food labelling, in stating nutritional and health claims on food, etc., - controls systems of certification, accreditation, organization of audits at the level of the company and suppliers, - controls food information systems and databases, manages and documents the internal control system in the company within the food safety team and senior management, - analyses, documents and evaluates crisis situations with the identification of possible risks at the company level as well as when communicating with the public and the media, - manages, controls and directs the activity of the crisis team,

	- applies engineering methods and procedures in food preservation, sensory analysis of food and microbiological and physic-chemical analysis of food, - carries out prediction and prevention of alimentary diseases, toxicological and mycological examinations, - manages and directs the activities of the company laboratory, controls and ensures the operation of the activities of the accredited food inspection laboratory, - applies knowledge of ISO standards and food quality and safety standards, - introduces and evaluates development studies of new products
Knowledge	ISO quality systems and standards, basic knowledge of regulations to ensure safety and health, protection at work, public health protection and fire, protection; principles of safe work and health protection at work, principles of safe behaviour at the workplace and safe work practices, HACCP and its basic principles, CCP validation and verification methods, principles of good production and hygienic practice in the production, transport, storage and sale of food, systems, norms and standards of quality and safety in the food industry, methods of control in the food industry, legal regulations and concepts related to food production waste sorting systems in the food industry, methods of reducing food losses caused by improper storage and preventing their contamination, factors affecting food quality and safety, technological procedures and processes ensuring the quality and health safety of food, chemical, physical and microbiological processes taking place during the processing and production of food products, methods of assessing the quality of raw materials, semi-finished products and finished products, types of hazards from the point of view of food safety, risks, critical control points in food production, chemical food safety - knowledge in the field of chemical food safety in relation to risks for consumers, with a focus on analyses of contaminants and analyses of additives, ways of sanitizing production premises and the methodology of its control, or level assessments, corrective and preventive measures in the event of disagreements to ensure the health and hygienic safety of food mathematical and statistical methods in evaluating the results of examinations, complaints and monitoring in the CCP, microbiological and mycological food safety, principles of microbiological stability of newly developed products in food production, microorganisms in food,

	microbiological and epidemiological aspects of the quality of food resources.
Skills	application and compliance with the principles of the HACCP system, introduction of food quality and safety standards, introducing methods of CCP monitoring and methods of their validation and verification, control of food operations focused on correct hygienic and production practice, compliance with CCP, applying the principles of good manufacturing practice and good hygienic practice in food production, warehouses and food stores, development of complete HACCP plans, mastery of basic knowledge of regulations to ensure safety and health protection at work, public health protection and fire protection; principles of safe work and health protection at work, principles of safe behaviour at the workplace and safe work procedures, preparation of expert opinions on legislative proposals, provision of proposals and changes, especially in food labelling, nutrition and health claims on food, introducing systems of preventive and corrective measures arising from disagreements, setting up a system of registration and evaluation of complaints in food production, food warehouses and food stores, technological preparation of production in the food industry, investigating the causes of reduced quality of food products and proposing measures to achieve the required quality, investigating the causes of reduced quality of food products and proposing measures to achieve the required quality, keeping and keeping records on the type, quantity and origin of waste in accordance with legal regulations, selection and implementation of food quality control methods development of quality control plans for food products, input, output and inter-operation control of raw materials, materials, semi-finished products and products in food production, control during receipt and issue in warehouses and when received in stores, design of new work procedures to increase production efficiency and work productivity in the food industry, analysis of the effects on the quality of raw materials, semi-finished products and finished products during their storage, transport and sale, ensuring processes and technological procedures in order to produce high-quality and health-safe food, drawing up control reports and reports on food health safety as part of official food control and audits, preparation of expert opinions on legislative proposals, provision of proposals and changes, especially in food labelling, nutrition and health claims on food,

	the use of various methods of food tracing and their operative removal from the market, analysis, information processing and subsequent communication about risks in the food industry.
Competences	
Application of graduates	Graduates will be employed in food companies in food safety teams, in company laboratories and in the management, control and audit department. They will be used in both state and private laboratories focused on food control and safety, they will be applied within the framework of advisory services, in the field of accreditation systems in the food industry, the creation of legislation, and the estimation of risks in the food industry. They are also widely used in the field of safety management in the distribution and business sphere as well as in public catering. They can also be used in food education, in state authorities, in foreign control institutions, in cooperation with the European Food Safety Authority, in scientific panels and working groups.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Min. the number of credits obtained in the first semester for advancement to further studies	It is not determined
Duration of the examination period	From 15.12. of the calendar year until 31.7. of the following calendar year
Conditions for admission to study	Evaluation criteria for applicants to study at II. degree of study a) point evaluation of the study average (maximum 40 points) b) point evaluation of the state exam (maximum 40 points) By adding the above two point values (a + b), the resulting point evaluation will be obtained, on the basis of which the order of applicants for study at II. degrees within individual study programs.

Continuity to other types of study programs (1st and 2nd level of study)	After completing the engineering studies, the graduate has the opportunity to continue his studies in the 3rd stage of university studies in the Food Technology study program.
Study obligations	The condition for proper completion of studies is the acquisition of 120 credits, including credits for the preparation and defence of the diploma thesis. Other conditions that the student must fulfil during the study of the study program and for its proper completion, including the conditions of state exams, rules for repeating studies and rules for extending and interrupting studies, are listed in Art. 13, 14, 15, 16, 17, 18, 19, 21, 23, of the internal regulations Study regulations of the SPU in Nitra
Mandatory study components	Thesis Practice
Compulsory subjects	***Compulsory subjects*** 1. Food adulteration and authentication 2. Food chemistry 3. Food microbiology 4. Food safety 5. Xenobiotics and nutraceuticals 6. Food technologies of animal origin 7. Food toxicology 8. Diploma thesis seminar I. 9. Seminar on engineering practice 10. Foodborne diseases 11. Food mycology 12. Food technologies of plant origin 13. Food legislation and control 14. Diploma thesis 15. Engineering work 16. Diploma thesis seminar II.
Optional subjects	***Compulsory elective subjects*** 1. Nutrigenomics 2. Sensometrics and informatics in the food industry 3. Food, nutrition and metabolism 4. Food safety 5. Bioactive metabolites of microorganisms 6. Risk assessment 7. Accreditation and certification in the food industry 8. Food and eating hygiene 9. Processing of poultry and minor livestock 10. Food sampling 11. Administrative law in the food industry 12. Genetically modified foods 13. Food marketing
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Student scientific conference

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Bachelor study program

Characteristics of the study program	
Name of the study program	**Food and technology in gastronomy**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3 academic years
Language of study	Slovak language
Awarded academic title	Bachelor (abbreviation Bc.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/ing-studijne-programy/
Study objectives in the study program	A graduate of the Food and Technology in Gastronomy study program masters the issues of the principles of correct production practice and correct hygienic practice at all stages of production, catering and sale of food and beverages, including hot and cold meals, ready-made meals, thermos sterilized semi-finished products and meals, shock-cooled and frozen meals, delicatessen and confectionery products, ice cream, drinks, fast food, or traditional dishes and meals respecting the latest trends. He can apply new technologies and gentle procedures for processing food, dishes and ready-made meals. Develops criteria and procedures for input, interoperation and output control of food, meals and ready meals, is responsible for quality control of incoming raw materials and finished meals, semi-finished products and meals. It is independent in management, decision-making and control processes, compiles product and service calculations, concludes contracts for the supply of domestic raw materials, products and goods with a guarantee of quality, freshness and safety.
Profile of a graduate of the study program	Based on the compulsory and compulsory optional subjects of the study plan, the graduate: - applies the basic and specific properties of foods of plant and animal origin, their composition, properties, structure and changes due to time, heat treatment and physic-chemical treatment, - affects the methods of food processing and storage based on the knowledge of positive and negative changes that take place in food, - analyses the causes of microbiological changes in food under different conditions, - applies knowledge about the chemical composition of food, the possibilities of its change, influences on the formation of new chemical substances in food, as well as possible interactions of chemical substances in food, or with the materials they come into contact with, - evaluates the organoleptic properties of food using classical and modern methods of sensory analysis, - evaluates the epidemiological severity and allergenic potential of food from the point of view of risk for the consumer, - differentiates the essence and principles of individual food preparation technologies in relation to being gentle on nutrients, preparation time and digestibility,

	- manages the options for choosing and offering food from the point of view of its sale, purchase for a catering establishment, catering company, or other ways of offering to consumers, - uses economic and marketing tools to influence the choice of food based on the widest possible number of factors with a positive impact on the consumer and his health, - applies and uses the latest knowledge about systems and technological procedures for the production of foods of plant origin, animal origin as well as mixed origin with the aim of reducing losses and energy consumption, - designs distribution and logistics systems for transporting food, ready-made meals and delicatessen and confectionery products, their storage, dispatch and sale, - applies legislation as a tool for management, control and prevention of deficiencies in the production of meals, ready-made meals, delicatessen and confectionery products, - applies the needs and health requirements of consumers to new and innovative foods, meals, semi-finished products and ready meals, - ensures the development of food, dishes and meals controlled by consumers using models, techniques, sensory and non-sensory specifications of food and meals, - applies modern instrumentation and laboratory technology for the purpose of checking the properties of food, ready-made meals and dishes.
Knowledge	- Know the principles and essence of the relationship between food and the consumer in terms of history, philosophy and importance for health. - Know the basic and specific properties of foods of plant origin, their composition, properties, structure and changes due to time, heat treatment and physic-chemical treatment. - Know the basic and specific properties of foods of animal origin, their composition, properties, structure and changes due to time, heat treatment and other physic-chemical treatment. - To influence the methods of food processing and storage based on the knowledge of positive and negative changes that take place in food. - In a broad context, influence the health of consumers by directing food production based on recommended nutritional doses and controlled consumption. - Know the basic biochemical processes taking place in food under the influence of various factors, under defined and natural conditions. - Distinguish the causes of microbiological changes in food under different conditions. - To know the chemical composition of food, the possibilities of its change, influences on the formation of new chemical substances in food, as well as possible interactions of chemical substances in food, or with the materials they come into contact with. - Evaluate the organoleptic properties of food using classic and modern methods of sensory analysis.

	- Know the mechanisms of physiological processes of digestion and absorption of individual forms of nutrients from food. - Evaluate the epidemiological severity and allergenic potential of foods from the point of view of risk for the consumer. - To distinguish the essence and principles of individual food preparation technologies in relation to nutrient efficiency, preparation time and digestibility. - Get to know individual food systems. - Manage food choices and offers from the point of view of their sale, purchase for a catering establishment, catering company, or other ways of offering to consumers. - Use economic and marketing tools to influence the choice of food based on the widest possible number of factors with a positive impact on the consumer and his health. - Acquire and use the latest knowledge about systems and technological procedures for the production of foods of plant origin, animal origin as well as mixed origin with the aim of reducing losses and energy consumption. - To design distribution and logistics systems for the transportation of food, ready-made meals and delicatessen and confectionery products, their storage, dispatch and sale. - Create and apply legislation as a tool for management, control and prevention of deficiencies in the production of meals, ready-made meals, delicatessen and confectionery products. - Link the principles of hygiene, sanitation and safety in sales and in catering establishments. - From a hygienic point of view, propose technical, technological, layout and construction modifications of catering establishments and establishments for the production of meals and delicacies, with the aim of changing the structure of production and sales of the assortment and improving marketing. - To propose innovation of the range and composition of offered meals, manufactured meals, or delicatessen and other products with the aim of positively changing eating habits and lifestyle. - To understand the ways in which consumers choose food and, on that basis, apply changes aimed at healthy eating. - To connect consumer perception, attitudes, preferences and behaviour of consumers towards new technologies, specific production methods and dietary regimes.
Skills	- Apply the principles of good manufacturing practice and good hygienic practice at all stages of production, catering and sale of food and beverages, including hot and cold meals, ready meals, thermos sterilized semi-finished products and meals, shock-cooled and frozen meals, delicatessen and confectionery products, ice cream, beverages , fast food dishes, or traditional dishes and meals respecting the latest trends. - Apply new technologies and gentle procedures for processing food, meals and ready-made meals. - Develop criteria and procedures for input, interoperation and output control of food, meals and ready meals. - Develop and implement a waste sorting system from the production of food, beverages and ready meals.

	- Develop and implement a system of reducing waste and saving food, meals, drinks and ready-made meals. - Develop and set up a system for registering and evaluating complaints.
Competences	Managerial competences - Incorporate the needs and health requirements of consumers into new and innovative foods, meals, semi-finished products and ready meals. - Develop consumer-driven foods, meals and meals using models, techniques, sensory and non-sensory food and meal specifications. - Apply modern instrumentation and laboratory technology in order to control the properties of food, ready-made meals and dishes. - To reduce differences in understanding and perception of opinions on food between consumers and experts on a scientific basis. - Analyse specific target groups – children, elderly people, ethnic groups, etc., with the aim of producing food, meals and dishes oriented to their needs. - Apply consumer-oriented strategies regarding the benefits, risks, safety and health benefits of specific types of diet and food origin. - Responsibility for quality control of incoming raw materials and finished meals, semi-finished products and meals. - Independence in management, decision-making and control processes. - Responsibility towards the team and customers. - Compile costings of products and services. - The ability to communicate and conclude contracts for the supply of domestic raw materials, products and goods with a guarantee of quality, freshness and safety. Professional competences - Develop new foods, dishes, semi-finished products and ready meals with high consumer benefit. - Plan, manage and control the preparation of ready-made meals, dishes, drinks, delicatessen and confectionery products. - Apply food quality requirements, ship and store them in accordance with standards. - Orientate yourself in the assortment of food and beverages and their gastronomic usability. - Safely use and maintain technical and technological equipment in gastronomic establishments. - Apply and ensure compliance with the HACCP system and hygiene regulations. - Apply gastronomic rules. - Organize and coordinate the activities of work teams in production and sales. - Organizationally and professionally ensure the preparation of gastronomic events. - Organize and contractually ensure supply and sales activities. - Orient yourself in modern forms of gastronomy, use marketing tools to present the business and offer services and products. - Apply quality parameters and standards of processes, products or services, take into account consumer requirements.

Application of graduates	Graduates of the Food and Technology in Gastronomy study program will gain knowledge about new technologies that enable the preservation of the nutritional value of food, acquire information about hygienic principles in the production and transportation of food, and acquire the basics of economic and business thinking. Graduates will be able to perform highly specialized activities for gastronomic services: nutritional-technological, hygienic, operational (marketing, business, business, management) and control in various job positions and legal organizational forms as an employee, employer or entrepreneur. The result of the study will be the acquired qualification "Specialist" - catering company manager; catering facility manager; manager of production and sales of delicatessen and confectionery products, including ice cream; food and beverage production technologist.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Min. the number of credits obtained in the first semester for advancement to further studies	6
Duration of the examination period	From 15.12. of the calendar year until 31.7. of the following calendar year
Conditions for admission to study	Criteria for evaluating applicants for study at the first level of study a) point assessment of matriculation exams (maximum 40 points) b) point evaluation of the results achieved during secondary school studies, including the results of the matriculation exam in the subjects of chemistry and biology (maximum 40 points, of which a maximum of 20 points for chemistry and a maximum of 20 points for biology). By adding up the two point values (a + b), the resulting point evaluation will be obtained, on the basis of which the order of

	applicants for study at the first degree within the individual study programs will be compiled.
Continuity to other types of study programs (1st and 2nd level of study)	After completing the engineering studies, the graduate has the opportunity to continue his studies in the 3rd degree of higher education in the Food Technology study program
Study obligations	The condition for proper completion of studies is the acquisition of 120 credits, including credits for the preparation and defense of the diploma thesis. Other conditions that the student must fulfill during the study of the study program and for its proper completion, including the conditions of state exams, rules for repeating studies and rules for extending and interrupting studies, are listed in Art. 13, 14, 15, 16, 17, 18, 19, 21, 23, of the internal regulations Study regulations of the SPU in Nitra
Mandatory study components	Bachelor thesis Practice
Compulsory subjects	***Compulsory subjects*** 1. Inorganic chemistry 2. Quality of food of plant origin 3. Basics of gastronomy 4. Basics of food processing and storage 5. Mathematics 6. Organic chemistry 7. Nutrition and catering 8. Food biochemistry 9. Technological devices in gastronomy 10. Food preparation technologies 11. Microbiology in gastronomy 12. Correct hygienic and production practice in gastronomy 13. Seminar on bachelor's thesis I. 14. Bachelor internship 15. Beverages and minor plant products in gastronomy 16. Hygiene of catering services and equipment 17. Management and marketing of gastronomic services 18. Bachelor thesis 19. Economics and accounting of gastronomic services 20. Seminar on bachelor's thesis II.
Optional subjects	***Compulsory elective subjects*** 1. Information resources in biology, biotechnology and food industry 2. Foreign language 3. Seminar on inorganic chemistry 4. Introduction to the study 5. Enogastronomy 6. Seminar on bachelor's practice 7. Seminar on organic chemistry 8. Physiology of human nutrition 9. Entrepreneurship in gastronomy 10. Sensory analysis of food 11. Epidemiology and food allergies

	12. Food packaging and labelling 13. Shared catering systems 14. Food production technologies I. 15. Legislation, control and consumer protection 16. Production of dietetic foods and meals 17. Production of traditional foods and meals 18. Authentication of dishes and meals 19. Food production technologies II.
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Student scientific conference

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Bachelor study program

Characteristics of the study program	
Name of the study program	**Food technology**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	2 academic years
Language of study	Slovak language
Awarded academic title	Engineer (abbreviation Ing.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/ing-studijne-programy/
Study objectives in the study program	The graduate masters the issues of food technologies of agricultural origin. It is ready to be used in the management of the production processes of enterprises in the agri-food sector of various types, with a broad focus on food technologies, both of plant and animal origin, and the utilization of emerging by-products.
Profile of a graduate of the study program	On the basis of completion of compulsory, compulsory optional and optional subjects of the study plan, the graduate: - controls modern methods of processing plant and animal products from the point of view of preserving the nutritional, hygienic and sensory value of the food produced from them. He knows how to work with literature, information, maintain contact with the development of his profession, - is therefore able to apply himself in the management teamwork of the production processes of various types of enterprises focused on food, - application is supported by theoretical knowledge of structural elements, functionality, technical and technological principles of processes of complete production lines and regulatory technology while respecting the quality (biological essence) of final products, ecological requirements and profitability of production. On the basis of acquired practical knowledge in the field of technological procedures of processing agricultural commodities, based on the current state of knowledge, the graduate can: - apply scientific, technical and social principles to preserve the quality of natural food sources and their effective use with special regard to regional policy in accordance with EU requirements, - creatively approach product innovation, - critically analyse and propose complex solutions.
Knowledge	- describe and identify the technological processes of processing meat and meat products, - describe and identify the technological processes of processing milk and milk products, - describe and identify the technological processes of processing bakery and confectionery products, - describe and identify the technological processes of malt and beer processing, - describe and identify the technological processes of

	processing non-alcoholic beverages, - describe and identify the technological processes of sugar, potato and starch processing, - describe and identify the technological processes of fruit and vegetable processing, - define and determine the conditions of microbiological quality of raw materials and food, - define and determine the chemical properties of raw materials and food, - manage technological processes in food production, - apply and control legislative requirements and requirements of standards, - propose and combine the use of food technology to optimize production processes.
Skills	- ensure the quality of food products, - to innovate technological production procedures and product recipes, - apply the principles of effective and gentle treatment of food to preserve its nutritional value, - organize work operations in the production, sale and storage of food, - analyse the causes of insufficient and low quality food, - check the food at the exit, - justify the causes of low food sales, - to propose new systems of marketing, sales and promotion of food.
Competences	- evaluate the quality and origin of input raw materials, - manage the technological process of food production, - revise incorrect production procedures and evaluation of production, - organize supplies of raw materials and additives, - compile a daily and weekly production program, - plan the purchase of raw materials, auxiliary substances, equipment and packaging, - assess and justify the results of audits at suppliers of raw materials, - compile new and innovative product recipes, - analyse the price policy and the competitive environment on the food market, - analyse the efficiency of the production process, key parameters of processes and products.
Application of graduates	Graduates will find the possibility of employment in businesses and joint-stock companies of various types (small- and large-scale operations, factories with a wide range of food technologies of plant and animal origin). In consultancy, in educational and research institutions, in associations of growers, breeders, processors (effective work in a team as a member or leader), in agricultural education (secondary, higher) and agri-food research. In the institutions of professional administration in the field of food quality

	preservation and health safety, with special regard to regional policy and the effective application of the Slovak Republic on the European (world) food market. In organizations preparing standards/norms for food raw materials and foodstuffs.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: a) mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Min. the number of credits obtained in the first semester for advancement to further studies	It is not determined
Duration of the examination period	From 15.12. of the calendar year until 31.7. of the following calendar year
Conditions for admission to study	Evaluation criteria for applicants to study at II. degree of study a) point evaluation of the study average (maximum 40 points) b) point evaluation of the state exam (maximum 40 points) By adding the above two point values (a + b), the resulting point evaluation will be obtained, on the basis of which the order of applicants for study at II. degrees within individual study programs.
Continuity to other types of study programs (1st and 2nd level of study)	After completing the engineering studies, the graduate has the opportunity to continue his studies in the 3rd degree of higher education in the Food Technology study program
Study obligations	The condition for proper completion of studies is the acquisition of 120 credits, including credits for the preparation and defence of the diploma thesis. Other conditions that the student must fulfil during the study of the study program and for its proper completion, including the conditions of state exams, rules for repeating studies and rules for extending and interrupting studies, are listed in Art. 13, 14, 15, 16, 17, 18, 19, 21, 23, of the internal regulations Study regulations of the SPU in Nitra.
Mandatory study components	Thesis Practice
Compulsory subjects	***Compulsory subjects*** 1. Food chemistry 2. Cereal processing technology 3. Milk technology I. (chemistry)

	4. Food microbiology 5. Xenobiotics and nutraceuticals 6. Malting and brewing 7. Meat technology I. (butchering) 8. Milk technology II (processing) 9. Diploma thesis seminar I. 10. Seminar on engineering practice 11. Technology of processing root crops and special crops 12. Diploma thesis 13. Engineering practice 14. Diploma thesis seminar II.
Optional subjects	***Compulsory elective subjects*** 1. Bioengineering 2. Food adulteration and authentication 3. Processing of poultry and minor animal products 4. Oenology 5. Food preservation 6. Gastronomic technologies 7. Risk assessment 8. Quality management 9. Cheese making 10. Technology of soft drinks 11. Technology of processing horticultural products 12. Genetically modified foods 13. Food legislation and control 14. Food mycology 15. Food marketing
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Student scientific conference

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Bachelor study program

Characteristics of the study program	
Name of the study program	Food Technology
Type of study program	Academically oriented
Study form	Daily, External
Standard length of study	Daily 4 academic years, External 5 academic years
Language of study	Slovak language
Awarded academic title	Doctor of Philosophy (abbreviation PhD.)
The field of education	Food science
Web	https://fbp.uniag.sk/sk/studijna-prirucka/
Study objectives in the study program	The aim of the study is to prepare the graduate for independent creative scientific activity and related activities in the field of agro-food research, development and education. He masters the latest scientific methods of basic and applied research in the field of processing agricultural products and food industry, technological procedures for the production of healthy food and the possibility of wider (also non-food) use (valuation) of agricultural products and materials. The graduate can formulate and verify new hypotheses for the further development of the food industry and apply his own findings of his theoretical analysis and his complex scientific research in the design, verification and implementation of new research and work procedures involving the optimization of raw material processing and food production with regard to the utilization of by-products (waste-free technologies), but especially with the aim of producing safe and high-quality food with high added value. The graduate is characterized by independent, critical and analytical thinking, takes social, scientific, legal, environmental and ethical aspects into account when formulating research objectives and interpreting research results. He can defend his own solutions to scientific problems and is ready to independently solve complex tasks in the field of science and development, as well as for management activities in various areas of the food industry.
Profile of a graduate of the study program	The profile of the graduate deals with the application of scientific knowledge, theories and innovative knowledge from practice in the development of new products. Independently and creatively uses available sophisticated tools, chemical, physical and microbiological methods, procedures and techniques to modify the chemical, physical, microbiological, technological and nutritional properties of newly developed foods. It also develops new test and control methods and procedures for evaluating food quality and safety. He can qualitatively and quantitatively describe, process and evaluate the results of research and development experiments and the resulting new food properties using modern statistical, mathematical and other tools or software. Based on them,

	taking into account the internal and external factors of the food environment, it can also predict changes in their behaviour in specific process, technological and storage conditions. He can clearly present and defend the results of research and development in front of responsible food experts and managers. By studying professional and scientific literature, following innovative trends in the given industry, in the form of training, courses, professional internships and consultations, he continuously increases and supplements his qualifications.
Knowledge	procedures for applying research results in the fields of health, agriculture, forestry, food or the environment, or in other economic practice, new approaches and concepts in the field of chemical and microbiological risk analysis, properties and possibilities of using biodegradable plastics food production technology, hygiene of food of animal origin, systems, norms and standards of quality and safety in the food industry, methods and procedures of sensory evaluation of food and beverages, food processing technology and food industry products, physical properties of food, mathematical-statistical methods and technical calculations in food production, principles of microbiological stability of newly developed products in food production, principles of application of additives and methods of their determination in innovative products of food production, principles of good manufacturing practice and the HACCP system - on hazard analysis, risk analysis, critical control points, methods of analysing hazards related to the type of innovative food product, ways of creating competitive analysis and studies for innovation or the development of a new product in food production, chemical food safety, food raw materials, their storage, food analysis methods, legal regulations and terms related to food production, the composition of food and food industry products, the need for innovation in food production, approaches to extending the shelf life of developed products in food production, principles of applying technological procedures for newly developed food production products, microbiological and mycological food safety
Skills	the application of new technologies and gentle procedures in the assessment and preparation of food, meals and ready-made meals, application of quality parameters and standards of food processes, products or services while taking into account consumer requirements,

	design and implementation of the experiment, defining measures against unwanted microorganisms in order to ensure the health and hygienic safety of food, selection and implementation of food quality control methods, introducing the principles and procedures of food and beverage reformulation, testing of new technical software solutions controlled by computers, or robots in food production, the use of data analytics (Big Data) in the food industry, application of distributed data calculations and structures in the food industry, the application of sensorimetric methods in the sensory evaluation of food, application of basic mathematical and statistical methods and technical calculations in food production, application of achieved research results and scientific and technical knowledge into operational practice, mastering the principles of scientific work, scientific problem formulation, presentation of results, development and application of alternative food processing processes, introduction and use of artificial intelligence and machine learning in the food industry, management and coordination of workers' activities, cooperation with other departments of the organization,
Competences	Organization and planning of scientific research work. Analytical thinking. Strategic and conceptual thinking. creativity Ability to make decisions and take responsibility. Critical thinking. Manual skill.
Application of graduates	Graduates will be employed in scientific and research institutions, education, in food enterprises in the areas of research and innovation. They will also find employment as teachers in secondary schools, managers in state and private organizations and laboratories.
Study rules and conditions	It regulates the Study Regulations of SPU in Nitra
Share of compulsory and compulsory optional subjects	The SP subjects are divided into: mandatory (up to a maximum of 60%) – are prescribed by SP, b) compulsory optional (in the range of 20%) – as a condition of completing part of the study or of the entire SP is the completion of these subjects in the specified or higher number credits according to the student's choice, c) optional – other SP subjects, or subjects from another SP, or SP subjects another faculty or university to obtain a sufficient number of credits in the given part

	study (§ 51 paragraph 4 letter j of the Act). The student writes them down to supplement his studies with the aim of use in future career application.
Conditions for admission to study	
Follow-up to further education	Graduates of the doctoral study program working in research or in education can, after meeting the criteria, obtain a scientific qualification degree, or to habilitate in the given field.
Study obligations	
Mandatory study components	Dissertation work Internship abroad
Compulsory subjects	***Compulsory subjects*** Compulsory subjects 1. Dissertation methodology 2. Methodology seminar 3. Experimental work I. 4. Professional language PhD. 5. Seminar on scientific publishing 6. State dissertation examination 7. Dissertation project I. 8. Experimental work II. 9. Pedagogical activity 10. Publications I. 11. Dissertation project II. 12. Defence of the dissertation 13. Publications II.
Optional subjects	***Compulsory elective subjects*** Compulsory elective subjects 1. Applied microbiology in the food industry 2. Bioanalytical methods of health food safety 3. Cereal chemistry and technology 4. Physical methods of evaluation of food materials 5. Genetically modified organisms 6. Environmental chemistry 7. Chemical risks of waste 8. Contaminants in food raw materials 9. Legislative-legal aspects of food 10. Food authentication control methods 11. Modern and prospective genetic analyses in the food industry 12. Molecular identification of food 13. Post-harvest processing technologies of plant products 14. Progressive technologies for processing animal products 15. Progressive technologies in canning 16. Progressive malt and beer production technologies 17. Risk substances in food 18. Risk factors of the food chain 19. Food safety management systems 20. Carbohydrate technology

	21. Production technologies of fermented meat products and pre-prepared meat dishes 22. Technological processing of by-products of the food industry
Foreign internships	Erasmus + CEEPUS
Student scientific conferences	Scientific conference of doctoral students Other scientific conferences

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Bachelor study program

Characteristics of the study program	
Name of the study program	**Feed and food safety**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3 academic years
Language of study	Slovak
Awarded academic degree	Bachelor (abbreviation Bc.)
Area of education	Veterinary medicine
Web	https://qa.uvlf.sk/sprg_info/?sprg_id=4
Objectives of the study in the study program	The objectives of education in the study programme Feed and Food Safety at the 1st level of study are methodologically based on the European Qualifications Framework for lifelong learning (EQF), which defines requirements for learning outcomes for knowledge, skills and competences. For level 6, the outcome of education is broad knowledge in the field of study, including a critical understanding of theories and principles. Graduates of the Bachelor study programme Feed and Food Safety master basic chemical and biological normative indicators of quality and health safety of feed and food and are oriented in legislation regulating the quality and health safety of feed and food. At the same time, they acquire the necessary basic knowledge in the field of feed and food production technology as the primary basis for managing the implementation of safety systems in the production and subsequent handling of feed and food. The bachelor study will also provide the graduate with knowledge in the field of informatics, statistics, biostatistics, economics, managerial ethics, business companies and their management.
Profile of a graduate of the study program	The three-year study is focused on acquiring knowledge from the point of view of the origin and negative impact of possible dangerous influences, factors, substances and biological agents endangering

	the health safety of feed and food. Students acquire core knowledge in the form of learning outcomes mainly through profile subjects, additional knowledge by completing other compulsory and compulsory optional subjects of the study programme. The bachelor study will provide graduates with theoretical knowledge in the field of valid legislation and practical skills in the field of evaluation of feed from a nutritional and dietary point of view, its digestibility and usability for production animals. Graduates of the study programme will master the basic methods of complex chemical, toxicological, microbiological and mycological analysis of feed and food, they will become familiar with the application of sanitation processes in feed and food production, as well as with the technologies of processing and treatment of organic waste in terms of the use of nutrients for the fertilization of pastures and soil within veterinary care for the environment and public health. Last but not least, graduates acquire practical skills in the implementation of hygiene requirements in the food industry with a focus on the production of safe food, including the principles of official food control. The conclusion of the bachelor study is focused on risk analysis and creation of safety systems (HACCP, manual of good hygiene practice) for individual sectors of feed and food production.
Skills	The bachelor study will provide the graduate with knowledge that can be applied as an assistant laboratory activity in food and feed analysis with a focus on quality and safety in state, private and corporate laboratories. Graduates of the Bachelor study programme Feed and Food Safety are able to independently plan, organize, implement and control activities in the field of food and feed safety systems, sanitation programs in food production, food and feed handling and circulation. They can carry out advisory, professional and expertise activities in the field of food and feed safety systems, act in solving the issue of environmental impact on the health safety of food and feed and vice versa – the impact of food and feed production on the environment.
Competences	Graduates of the study programme Feed and Food Safety acquire generally defined competencies for EQF level 6, i.e. the ability to manage complex technical or

	professional activities or projects, to take responsibility for decision-making in an unpredictable work or study environment and to assume responsibility for managing the professional development of individuals and groups. The real competencies of graduates depend on their specific labour law classification.
Employment of graduates	The bachelor study will provide the graduate with knowledge that can be applied as an assistant laboratory activity in food and feed analysis with a focus on quality and safety in state, private and corporate laboratories. Graduates of the Bachelor study programme Feed and Food Safety are able to independently plan, organize, implement and control activities in the field of food and feed safety systems, sanitation programs in food production, food and feed handling and circulation. They can carry out advisory, professional and expertise activities in the field of food and feed safety systems, act in solving the issue of environmental impact on the health safety of food and feed and vice versa – the impact of food and feed production on the environment.
Study rules and conditions	UVMP in Košice in the study plan for the full-time form of study has the following conditions completion of individual parts of the study programme and the student's progress in the study programme in the structure: - number of credits for compulsory subjects required for regular completion of studies, - number of credits for compulsory subjects required for the regular completion of part of the study, - number of credits for compulsory elective and/or elective subjects required for regular completion of studies, - the number of credits per block of subjects of state examinations necessary for the regular completion of studies.
Min. number of credits obtained in the first semester for further study	After the first year of study, each student must earn at least 45 credits; After the last state exam, each student must have earned at least 180 credits. State exams can be taken by a student who achieved 160 credits for PP and at least 6 credits for PVP during his studies. A minimum of 180 credits must be obtained to complete the study.

	Standard number of credits for one year of study: 58 (compulsory subjects) +2 (compulsory optional + optional subjects)
Duration of the trial period	Trial period Winter semester: starts on the 14th week after the start of classes, lasts at least seven weeks and ends before the start of classes in the summer semester; Probationary period Summer semester: starts on the 14th week after the start of classes in the summer semester, lasts until July 14 and continues from August 16, ending 3 working days before the end of the respective academic year, when the student can also take exams for the winter semester; Trial period during the main summer holidays – during the main summer holidays, i.e. from l5. July to 15 August is not tested, as this period is reserved for drawing Vacations.
Conditions for admission to study	Admission of applicants to study at UVMP in Košice is conditional upon obtaining complete secondary education or complete secondary vocational education. The admissions committee evaluates the applicant's success and verifies his/her abilities and prerequisites for study in a broader context on the basis of the following criteria: the ranking of applicants is determined on the basis of the assigned points for the average from the school-leaving examination and points for active participation in secondary school olympiads and SOC from profile subjects (biology, chemistry), and for other activities that the student must document in writing with the application for study.
Follow-up to other types of study programs (1st and 2nd degree study)	After completing the Bachelor study, the graduate has the opportunity to continue their studies in the 2nd degree of university study in the follow-up Master study programme **Food Market and Quality**
Study obligations	The condition for regular completion of the study is the acquisition of 180 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper

	completion, including the conditions of state examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Articles 9, 15, 16, 17, 21, 22 and 29 of the internal regulation Study Regulations of UVMP in Košice, Part A.
Mandatory parts of the study	Bachelor's thesis
Obligatory subjects	***Compulsory subjects*** 1. Analytical chemistry 2. Contaminant analysis in feed and food 3. Applied biochemistry 4. Biochemistry 5. Biology 6. Biophysical examination methods 7. Hygiene requirements for food production 8. Informatics 9. Food and feed legislation 10. Management ethics 11. Microbiology 12. Microbiology of food and feed 13. Mycology and mycotoxicology of food and feed 14. Nutritional and dietary evaluation of feedingstuffs 15. Organic chemistry 16. Growing and preserving of fodder plants and feedingstuffs 17. Food chemistry 18. Preparation of final thesis 19. Sanitation in feed and food production 20. Processing technology and safety systems in feed production 21. Technology and safety systems for processing plant commodities 22. Technology and safety systems for processing animal commodities 23. General and inorganic chemistry 24. Basics of anatomy and physiology of food animals 25. Basics of ecology 26. Basics of statistics and biostatistics 27. Zootechnics – Animal husbandry
Optional subjects	***Compulsory optional subjects*** 1. English / German 2. Food packaging and labelling 3. Game farming

	4. Hygiene requirements in catering facilities and gastronomy 5. Food business management 6. Parasitic and infectious diseases of food animals 7. Food allergies and intolerances 8. Basics of the economy 9. Business basics 10. Health safety and quality of food from biotechnology production ***Elective subjects*** 1. Physical education 2. Genetic Engineering Basics
Internships abroad	Erasmus+ CEEPUS
Student scientific conferences	Student Scientific Conference - ŠVOČ

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Doctoral study programme

Characteristics of the study program	
Name of the study program	**Food hygiene**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	4 academic years
Language of study	Slovak
Awarded academic degree	*Philosophiae doctor* (abbreviation PhD.)
Area of education	Veterinary medicine
Web	https://qa.uvlf.sk/sprg_info/?sprg_id=7&ar=20232024
Objectives of the study in the study program	The educational objectives achieved in the study programme Food Hygiene, 3rd level of higher education study are methodologically based on the European Qualifications Framework for lifelong learning (EQF). It defines requirements for learning outcomes for knowledge, skills and competences. For level 8, highly specialised knowledge is required as learning outcomes, some of which are at the forefront of work or study and are the basis for original thinking and/or research; fundamental awareness of knowledge in a given field and at the interface between individual fields. The educational situation in this study program requires solving tasks in which many related factors act, education is often highly specialized. The carriers of core knowledge are profile subjects that describe in the information sheets the knowledge achieved as learning outcomes. Additional knowledge is achieved by completing other compulsory optional subjects of the study programme. By completing profile subjects, the graduate gains knowledge about the importance of hygiene and quality of food production of animal origin for their health safety. They will learn the latest methods of food production technology, while acquiring the latest scientific knowledge in the field of food production.
Profile of a graduate of the study program	Graduates of the study programme Food Hygiene are qualified to perform the profession of a veterinarian specialist in hygiene,

	quality and health safety of produced food after completing the 3rd degree of higher education. The graduate masters scientific methods of research and development, with a focus on research in the field of hygiene and quality of food of animal and plant origin, development of food technology, laboratory diagnostic methods, development of food legislation, etc. Graduates can create and formulate new hypotheses, judgments and strategies for further development of the scientific or work field, evaluate theories, concepts and innovations, apply their own findings resulting from theoretical analysis and their own scientific research of complex and interdisciplinary character, design, verify and implement new research and work procedures. The graduate is characterized by critical, independent and analytical thinking in the direction of further development of the company, responsibility for leadership in the field of study and planning of own development and development of the company in the field of hygiene and quality of food produced. Graduates are able to present and publish their evidence-based research results in front of the professional and scientific community. It proposes, validates and implements new research and working methods based on the results obtained, which it subsequently presents and uses in the application of new scientific and working methods. They can determine the focus of research and coordinate a team in the scientific field in research organizations, as well as manage problem solving in food practice. In proportion to the impact of the studied issue, the need for professionals and the justification of education in the field of food hygiene specialization increase.
Skills	The graduate of SP Food Hygiene is characterized by independent, critical and analytical thinking. It takes social, scientific and ethical aspects into account when formulating research intentions and interpreting research results. With the results of its own creative work, it contributes to the development of science, scientific knowledge and the application of acquired knowledge into practice. It presents the results of research and development to the professional community independently. They can determine the focus of research and coordinate the team in scientific investigation. Based on its outputs and findings, it is able to independently design, verify and implement new research and working procedures.
Competences	Responsibility and autonomy, defined for EQF level 8, are the ability to demonstrate significant authority, innovation, autonomy, scientific and professional integrity and sustained commitment to developing new ideas or practices that are at

	the forefront of a given work or study environment, including research. Specific competencies will be related to the graduate's employment status.
Employment of graduates	Graduates of the study programme Food Hygiene, 3rd degree of study can find employment in independent research in the field of production of safe and quality food, hygiene management of food operations, as well as management of production technology in food companies. Graduates are ready to carry out activities in accredited laboratories in the field of food analysis, as well as to provide consultancy in the field of hygiene of food production and sale. PhD graduates will also find employment in: 1) mastering of data, statistical and information processes, correct setting of hygienic conditions and processing of raw materials of animal and plant origin, 2) food business management focusing mainly on food production hygiene, evaluation of raw materials entering the production process and their impact on the quality of products of animal origin, 3) advice and control in the field of hygiene of food production and marketing, feed production, compliance with welfare, advice and prevention of livestock diseases.
Study rules and conditions	Conditions for completion of individual parts of the study programme and the student's progress in the study programme in the structure: UVMP in Košice The study plan for the full-time form of study has specified the conditions for completion of individual parts of the study programme and the student's progress in the study programme in the structure: - number of credits for profile subjects required for regular graduation: 50 - number of credits for 2 selected compulsory optional subjects necessary for regular graduation: 10, - number of credits for the dissertation exam: 20 - number of credits for the defense of the final thesis required for the regular completion of the study: 30 The dissertation exam can be taken by a student who achieved 50 credits for PP and at least 10 credits for PVP during his/her studies no later than 24 months from the beginning of the doctoral study. A minimum of 240 credits must be obtained to complete the study.
Minimal number of credits obtained in the first semester for further study	- After the first year of study, each student must obtain at least 40 credits for the study part and 20 credits for the scientific part,

	- after the second year of study, each student must obtain at least 30 credits for the study part and 30 credits for the scientific part, - after the third year of study, each student must obtain at least 5 credits for the study part and 55 credits for the scientific part, - After the fourth year of study, each student must obtain at least 5 credits for the study part and 55 credits for the scientific part.
Duration of the trial period	Trial period Winter semester: starts on the 14th week after the start of classes, lasts at least seven weeks and ends before the start of classes in the summer semester; Probationary period Summer semester: starts on the 14th week after the start of classes in the summer semester, lasts until July 14 and continues from August 16, ending 3 working days before the end of the respective academic year, when the student can also take exams for the winter semester; Trial period during the main summer holidays – during the main summer holidays, i.e. from l5. July to 15 August is not tested, as this period is reserved for drawing Vacations.
Conditions for admission to study	The basic condition for admission to study at the third level of higher education in full-time form in accredited study programmes at UVMP is completion of the study programme of the second degree or combining the first and second degree of university study of the relevant focus and completion of the entrance examination. Admission of an applicant to doctoral study at UVMP is conditional on successful completion of the admission procedure.
Study obligations	The condition for regular completion of the study is the acquisition of 240 credits, which also includes credits for passing the dissertation exam and defending the dissertation thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of state examinations, rules for repeating studies and rules for prolongation, interruption of studies are specified in Articles 2, 15, 18, 19 and 29 of the internal regulation Study Regulations of UVMP in Košice, Part B.
Mandatory parts of the study	Dissertation project, Dissertation thesis
Compulsory subjects	1. Hygiene and quality of meat and meat products

	2. Hygiene and quality of poultrymeat, eggs and game meat 3. Hygiene and quality of milk and milk products 4. Food microbiology and foodborne diseases 5. Legislative requirements for health safety and food quality
Optional subjects	1. Biotechnological production and quality of beverages 2. Hygiene and quality of plant foods 3. Hygiene and quality of fish and fishery products 4. Food toxicology
Internships abroad	Erasmus+ CEEPUS
Student scientific conferences	Scientific conference HYGIENE ALIMENTORUM; Seminar of PhD students dedicated to the memory of academician Boďa

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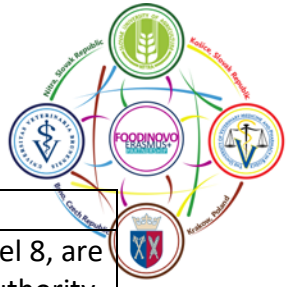
Doctoral study programme

Characteristics of the study program	
Name of the study program	**Food hygiene**
Type of study program	Academically oriented, 3rd degree of university studies
Study form	External
Standard length of study	4 academic years
Language of study	Slovak
Awarded academic degree	*Philosophiae doctor* (abbreviation PhD.)
Area of education	Veterinary medicine
Web	https://qa.uvlf.sk/sprg_info/?sprg_id=7&ar=20232024
Objectives of the study in the study program	The educational objectives achieved in the study programme Food Hygiene, 3rd level of higher education study are methodologically based on the European Qualifications Framework for lifelong learning (EQF). It defines requirements for learning outcomes for knowledge, skills and competences. For level 8, highly specialised knowledge is required as learning outcomes, some of which are at the forefront of work or study and are the basis for original thinking and/or research; fundamental awareness of knowledge in a given field and at the interface between individual fields. The educational situation in this study program requires solving tasks in which many related factors act, education is often highly specialized. The carriers of core knowledge are profile subjects that describe in the information sheets the knowledge achieved as learning outcomes. Additional knowledge is achieved by completing other compulsory optional subjects of the study programme. By completing profile subjects, the graduate gains knowledge about the importance of hygiene and quality of food production of animal origin for their health safety. They will learn the latest methods of food production technology, while acquiring the latest scientific knowledge in the field of food production.
Profile of a graduate of the study program	Graduates of the study programme Food Hygiene are qualified to perform the profession of a veterinarian

	specialist in hygiene, quality and health safety of produced food after completing the 3rd degree of higher education. The graduate masters scientific methods of research and development, with a focus on research in the field of hygiene and quality of food of animal and plant origin, development of food technology, laboratory diagnostic methods, development of food legislation, etc. Graduates can create and formulate new hypotheses, judgments and strategies for further development of the scientific or work field, evaluate theories, concepts and innovations, apply their own findings resulting from theoretical analysis and their own scientific research of complex and interdisciplinary character, design, verify and implement new research and work procedures. The graduate is characterized by critical, independent and analytical thinking in the direction of further development of the company, responsibility for leadership in the field of study and planning of own development and development of the company in the field of hygiene and quality of food produced. Graduates are able to present and publish their evidence-based research results in front of the professional and scientific community. It proposes, validates and implements new research and working methods based on the results obtained, which it subsequently presents and uses in the application of new scientific and working methods. They can determine the focus of research and coordinate a team in the scientific field in research organizations, as well as manage problem solving in food practice. In proportion to the impact of the studied issue, the need for professionals and the justification of education in the field of food hygiene specialization increase.
Skills	The graduate of SP Food Hygiene is characterized by independent, critical and analytical thinking. It takes social, scientific and ethical aspects into account when formulating research intentions and interpreting research results. With the results of its own creative work, it contributes to the development of science, scientific knowledge and the application of acquired knowledge into practice. It presents the results of research and development to the professional community independently. They can determine the focus of research and coordinate the team in scientific investigation. Based on its outputs and findings, it is able to independently design, verify and implement new research and working procedures.



Competences	Responsibility and autonomy, defined for EQF level 8, are the ability to demonstrate significant authority, innovation, autonomy, scientific and professional integrity and sustained commitment to developing new ideas or practices that are at the forefront of a given work or study environment, including research. Specific competencies will be related to the graduate's employment status.
Employment of graduates	Graduates of the study programme Food Hygiene, 3rd degree of study can find employment in independent research in the field of production of safe and quality food, hygiene management of food operations, as well as management of production technology in food companies. Graduates are ready to carry out activities in accredited laboratories in the field of food analysis, as well as to provide consultancy in the field of hygiene of food production and sale. PhD graduates will also find employment in: 1) mastering of data, statistical and information processes, correct setting of hygienic conditions and processing of raw materials of animal and plant origin, 2) food business management focusing mainly on food production hygiene, evaluation of raw materials entering the production process and their impact on the quality of products of animal origin, 3) advice and control in the field of hygiene of food production and marketing, feed production, compliance with welfare, advice and prevention of livestock diseases.
Study rules and conditions	Conditions of completion of individual parts of the study programme and the student's progress in the study programme in the structure: UVMP in Košice The study plan for the part-time form of study has specified the conditions for completion of individual parts of the study programme and the student's progress in the study programme in the structure: - number of credits for profile subjects required for regular graduation: 50 - number of credits for 2 selected compulsory optional subjects necessary for regular graduation: 10, - number of credits for the dissertation exam: 20 - number of credits for the defense of the final thesis required for the regular completion of the study: 30




	The dissertation exam can be taken by a student who achieved 50 credits for PP and at least 10 credits for PVP during his/her studies no later than 24 months from the beginning of the doctoral study. A minimum of 240 credits must be obtained to complete the study.
Minimal number of credits obtained in the first semester for further study	- After the first year of study, each student must obtain at least 40 credits for the study part and 20 credits for the scientific part, - after the second year of study, each student must obtain at least 30 credits for the study part and 30 credits for the scientific part, - after the third year of study, each student must obtain at least 5 credits for the study part and 55 credits for the scientific part, - After the fourth year of study, each student must obtain at least 5 credits for the study part and 55 credits for the scientific part.
Duration of the trial period	Trial period Winter semester: starts on the 14th week after the start of classes, lasts at least seven weeks and ends before the start of classes in the summer semester; Probationary period Summer semester: starts on the 14th week after the start of classes in the summer semester, lasts until July 14 and continues from August 16, ending 3 working days before the end of the respective academic year, when the student can also take exams for the winter semester; Trial period during the main summer holidays – during the main summer holidays, i.e. from l5. July to 15 August is not tested, as this period is reserved for drawing Vacations.
Conditions for admission to study	The basic condition for admission to study at the third level of higher education in part-time form in accredited study programmes at UVMP is completion of the study programme of the second level or combining the first and second degree of higher education study of the relevant focus and completion of the entrance examination. Admission of an applicant to doctoral study at UVMP is conditional on successful completion of the admission procedure.
Study obligations	The condition for regular completion of the study is the acquisition of 240 credits, which also includes credits for passing the dissertation exam and defending the

	dissertation thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of state examinations, rules for repeating studies and rules for prolongation, interruption of studies are specified in Articles 2, 15, 18, 19 and 29 of the internal regulation Study Regulations of UVMP in Košice, Part B.
Mandatory parts of the study	Dissertation project, Dissertation thesis
Compulsory subjects	1. Hygiene and quality of meat and meat products 2. Hygiene and quality of poultrymeat, eggs and game meat 3. Hygiene and quality of milk and milk products 4. Food microbiology and foodborne diseases 5. Legislative requirements for health safety and food quality
Optional subjects	1. Biotechnological production and quality of beverages 2. Hygiene and quality of plant foods 3. Hygiene and quality of fish and fishery products *4.* Food toxicology
Internships abroad	Erasmus+ CEEPUS
Student scientific conferences	Scientific conference HYGIENE ALIMENTORUM; Seminar of PhD students dedicated to the memory of academician Boďa

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Bachelor's study program

Characteristics of the study program	
Name of study program	**Animal Science**
Type of study program	Academically oriented bachelor study program; Joint study programme
Form of study	Daily
Standard length of study	3 academic years
Language of study	English language
Academic degree awarded	Bachelor (abbreviation BSc.)
Field of education	Veterinary medicine
Web	https://qa.uvlf.sk/en/sprg_info/?sprg_id=13
Objectives of study in the study programme	The objectives of education in the study programme Feed and Food Safety at the 1st level of study are methodologically based on the European Qualifications Framework for lifelong learning (EQF), which defines requirements for learning outcomes for knowledge, skills and competences. For level 6, the outcome of education is broad knowledge in the field of study, including a critical understanding of theories and principles. Graduates of the study programme falling under level 6 are characterized by independence in solving specific problems in a changing environment, planning their own education, autonomy and responsibility in decision-making, ability to appropriately and professionally present their own opinions, creative and flexible thinking. The carriers of the graduate's core knowledge are profile subjects.
Profile of the graduate of the study programme	Profile of the graduate of the study programme Animal Science - graduate of the study programme Animal Science acquires knowledge about biological laws of living nature in relation to veterinary medicine, gets to know the issue of living matter in a broader context with regard to the ecosystem and their mutual interaction. The aim of the study is knowledge of biochemical processes in complex with the physiology of organs and systems of microorganisms and macroorganisms with differences in individual animal species.

Skills	The graduate has broad knowledge of the construction and physiology of domestic animals, understands the basic principles of pathogenesis, diagnosis and treatment of common diseases of domestic animals, is oriented in research and development in the field of animal science, has knowledge of historical development, traditions and social significance of animals. Graduates of the study programme Study of animals can be applied in practice, especially in the field of animal husbandry and veterinary medicine, and they can update their knowledge about the care, health and well-being of pets.
Competence	Graduates of the joint bachelor study programme after obtaining the bachelor degree acquired theoretical and practical knowledge based on current knowledge of science and mastered their use in the practice of the profession in the private veterinary sphere, in the field of food safety. or in the advisory, research and teaching fields, or in further university studies in veterinary medicine, doctoral studies or master's degrees in biology and aquaculture.
Employment of graduates	Based on many years of experience with graduates of the study programme Animal Science, it can be stated that graduates after obtaining a bachelor's degree acquired theoretical and practical knowledge of biological sciences and mastered their use in the exercise of professions in the private veterinary sphere, in the field of food safety or in the advisory, research and pedagogical fields. Graduates are also prepared for further university studies in veterinary medicine or master's studies in biology and aquaculture.
Study rules and conditions	UVMP in Košice in the study plan for the full-time form of study has specified the conditions for completion of individual parts of the study programme and the student's progress in the study programme in the structure: - number of credits for profile subjects required for regular completion of studies/completion of part of the study: 28 - number of credits for compulsory subjects required for regular completion of studies/completion of part of studies: 136 - number of credits for compulsory optional subjects required for regular completion of studies/completion of part of the study: 9 - number of credits for the defense of the bachelor thesis: 5

Min. number of credits obtained in the first semester for further study	After the first year of study, each student must earn at least 60 credits; after the second year 57 credits and after the third year 47 credits. After the last state exam, each student must have earned at least 180 credits. State exams can be taken by a student who achieved 164 credits for PP and at least 6 credits for PVP during his studies. A minimum of 180 credits must be obtained to complete the study.
Duration of the trial period	Trial period Winter semester: starts on the 14th week after the start of classes, lasts at least seven weeks and ends before the start of classes in the summer semester; Probationary period Summer semester: starts on the 14th week after the start of classes in the summer semester, lasts until July 14 and continues from August 16, ending 3 working days before the end of the respective academic year, when the student can also take exams for the winter semester; Trial period during the main summer holidays – during the main summer holidays, i.e. from l5. July to 15 August is not tested, as this period is reserved for drawing Vacations.
Conditions for admission to study	Admission of the applicant to study at UVMP in Košice is conditional upon completion of the admission procedure at the Faculty of Biosciences and Aquaculture, Nordic University in Bodø, Norway, which is a co-partner of this study programme.
Continuity with other types of study programmes (1 and 2 level of study)	After completing the Bachelor study, the graduate has the opportunity to continue his studies in the combined 1st and 2nd degree of university study in the study program **General Veterinary Medicine**
Study obligations	The condition for regular completion of the study is the acquisition of 180 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of state examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Articles 9, 15, 16, 17, 21, 22 and 29 of the internal regulation Study Regulations of UVMP in Košice, Part A.
Mandatory parts of the study	Final thesis
Compulsory subjects	***Compulsory subjects***

	1. Aquaculture 2. Animal husbandry 3. Animal hygiene, welfare and behaviour of animals 4. Animal nutrition 5. Basics of laboratory diagnostics 6. Biochemistry 7. Biochemistry and cell biology 8. Biomedical statistics and informatics 9. Diversity of life II – Vertebrates 10. Fish breeding 11. Food safety 12. Genetics and evolution 13. Histology and embryology 14. Chemistry and biophysics 15. Introduction to pharmacology 16. Introduction to veterinary epizootiology 17. Laboratory safety 18. Latin terminology 19. Microbiology 20. Microbiology, immunology and parasitology 21. Molecular cell biology 22. Pathological physiology 23. Preventive veterinary medicine, sanitation and public health 24. Veterinary anatomy and histology 25. Veterinary clinical sciences 26. Veterinary ethics and legislation 27. Zoophysiology
Optional subjects	***Compulsory optional subjects*** ***Elective subjects*** 1. Breeding of game 2. Cynology 3. Physical education 4. English language
Internships abroad	Erasmus+ CEEPUS
Student scientific conferences	Student Scientific Conference - ŠVOČ

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Inovácia štruktúry a obsahového zamerania študijných programov profilujúcich potravinárske študijné odbory s ohľadom na digitalizáciu výučby

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Follow-up master's study program

Characteristics of the study program	
Name of the study program	**Market and Food Quality**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	2 academic years
Language of study	Slovak language
Awarded academic degree	Master's degree (Mgr. abbreviation)
Area of education	Veterinary medicine
Web	https://qa.uvlf.sk/sprg_info/?sprg_id=4
Objectives of the study in the study program	The objectives of education achieved in the study programme Market and Food Quality, in the 2nd level of study methodologically follow the European Qualifications Framework for lifelong learning (EQF). It defines requirements for learning outcomes for knowledge, skills and competences. For level 7, highly specialised knowledge is required as learning outcomes, some of which are at the forefront of work or study and are the basis for original thinking and/or research; fundamental awareness of knowledge in a given field and at the interface between individual fields.
Profile of a graduate of the study program	By completing the profile courses, the graduate will gain theoretical and practical knowledge about the technologies of production of plant and animal products with a focus on the safety of the products produced, where adherence to the principles of good manufacturing practice will ensure the production of safe food. The graduate will acquire knowledge of risk management in food production. The graduate will also gain knowledge of the provision of official food control on the Slovak and European markets and knowledge of the EU common market protection systems. He/she will gain theoretical knowledge about food quality management systems, in the field of food safety he/she will gain knowledge about possible contaminants in food with acquaintance with their risk to human health, he/she will

	gain knowledge about the use of food additives in food and their positive effects and risks of use in food practice; In the field of food quality, the graduate will gain knowledge about the quality parameters of produced foodstuffs, as well as knowledge of the assessment of sensory and chemical parameters of food quality; he will gain practical experience as well as theoretical knowledge in the field of food analysis usable in state and private laboratories dealing with food analysis, he will know the principles of water protection, water resources and the assessment of water quality indicators for the food industry, as well as solutions for wastewater recovery. The graduate will also acquire knowledge in the field of hygiene of catering establishments, legislative requirements for catering establishments, as well as methods of heat treatment of food; he will become familiar with the positive as well as negative characteristics of different types of catering food treatment, as well as with the risks of eating raw and cooked food. A general overview of the legislation governing the legislative requirements for the production, distribution and sale of foodstuffs and, last but not least, an understanding of the Common Agricultural Policy within the EU.
Skills	For the skills achieved by learning outcomes corresponding to level 7, specialised skills are required in solving research and/or innovation problems in order to develop new knowledge and practices and to integrate knowledge from different fields. The information sheets describe the skills that the graduate of the course will achieve. Together, the skills achieved in the individual subjects represent an interrelated complex that results in skills that determine the successful implementation of the competences. By completing the profile courses, the graduate will acquire skills that will enable him/her to manage technological processes of food production, to solve tasks related to the safety and quality of the food produced, as he/she has important knowledge of a wide range of production technologies in the food industry, as well as safety risks and ways of their elimination; he/she is able to actively contribute to the protection of the environment in relation to animal husbandry; he/she is able to actively manage the safety of food production, by analysing the risk to evaluate and eliminate possible hazards in the production process. Able to participate in the introduction of quality systems into the production process.

	As a technologist, he is able to prepare new product formulations and can evaluate the use of additives in the production process. He is qualified to carry out official control of foodstuffs within the Slovak and European markets, he is able to independently carry out control of the production process and hygiene of production plants, as well as foodstuffs in the commercial network. The graduate is able to audit food processing plants, commercial establishments as well as catering facilities, evaluate risks and take corrective measures. In the context of catering establishments, the student is able to evaluate hygiene risks and take corrective measures. Is able to work independently in the laboratory on chemical and sensory food quality. The graduate is able to provide expert advice and consultancy on food production hygiene, food quality management systems and legislative requirements for food labelling within the European market.
Competences	The broadly defined competencies for level 7 of the EQF are - to manage and transform contexts of work or study that are complex, unpredictable and require new strategic approaches, and to be accountable for contributing to professional knowledge and practice and/or for evaluating the strategic performance of teams. This qualification is achieved by senior professionals and managers who have access to work and career progression in a specialist area. Their level supports direct access to highly specialised independent work and is a qualification for careers in professional and managerial work. The specific competences will be related to the graduate's employment status.
Follow-up to other types of study programs (1st and 2nd degree study)	After completing the doctoral study in the combined 1st and 2nd degree of university study, the graduate has the opportunity to continue his/her studies in the 3rd degree of university study in 10 study programmes in full-time and part-time form. https://www.uvlf.sk/informacie-pre-studentov-phd/doktorandske-studijne-programy
Employment of graduates	Graduates of the study programme Market and Food Quality can find employment as a technologist of food operations, an expert in the field of food safety and quality in food operations, an auditor of food operations, gastronomic operations and business operations, an inspector of the State Veterinary Administration of the Slovak Republic in the field of food control in the trade network, an expert in food analysis in state and private laboratories in food analysis.

Study rules and conditions	UVMP in Košice in the study plan for the full-time form of study has the following conditions completion of individual parts of the study programme and the student's progress in the study programme programme structured at: - number of credits for compulsory subjects required for regular completion of studies, - number of credits for compulsory subjects required for the regular completion of part of the study, - number of credits for compulsory elective and/or elective subjects required for regular graduation, - the number of credits per block of state examination subjects necessary for proper completion study.
Minnimal number of credits obtained in the first semester for further study	After the first year of study, each student must earn at least 45 credits; After the last state exam, each student must have earned at least 120 credits. Standard number of credits for one year of study: 56 (compulsory subjects) +4 (compulsory optional + optional subjects)
Duration of the trial period	Trial period Winter semester: starts on the 14th week after the start of classes, lasts at least seven weeks and ends before the start of classes in the summer semester; Probationary period Summer semester: starts on the 14th week after the start of classes in the summer semester, lasts until July 14 and continues from August 16, ending 3 working days before the end of the respective academic year, when the student can also take exams for the winter semester; Trial period during the main summer holidays – during the main summer holidays, i.e. from 15. July to 15 August is not tested, as this period is reserved for drawing Vacations.
Conditions for admission to study	Applicants who have completed the first cycle of university studies can be accepted. The admission of applicants is determined on the basis of the weighted study average for the entire study for the previous study at the first cycle university studies (without state examinations). The study programme is also open for continuation of study at the 2nd degree of university study of related study programmes of another higher education institution. For the inclusion of the application for study, a positive opinion of

	the committee is required, which will evaluate the suitability of the applicant on the basis of a comparison of study plans of the completed study programme of the first degree of higher education study. The admission of applicants is determined on the basis of the weighted study average for previous studies.
Study obligations	The condition for regular completion of the study is the acquisition of 120 credits, which also includes credits for the preparation and defense of the diploma thesis and for the completion of professional practice (internship) in the prescribed scope. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of state examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Articles 9, 15, 16, 17, 21, 22 and 29 of the internal regulation Study Regulations of UVMP in Košice, Part A.
Mandatory parts of the study	Master's thesis
Obligatory subjects	I. year štúdia: 1. Sensory analysis of food 2. Production technology and quality of frozen and canned plant food - PFP 3. Common agricultural policy 4. Legislative and hygiene requirements for mass caterers 5. Biotechnological production and food quality - PFP 6. Production technology and cereal quality 7. Production technology and quality of sugars 8. Production technology and quality of poultry, fish, game and honey products - PFP 9. Production technology and quality of milk and dairy products 10. Production technology and quality of meat and meat products 11. Growing and quality of fresh fruit and vegetables 12. Preparation of final thesis II. year of study: 1. Commodity science 2. Production technology and quality of milk and dairy products - PFP 3. Production technology and quality of meat and meat products - PFP 4. Production technology and fat quality

	5. Growing and quality of fresh fruit and vegetables 6. Preparation of final thesis 7. Food control within the common market - PFP 8. Fauna food quality management systems. Origin 9. Plant food quality management systems. Origin 10. Official control of foodstuffs 11. Technological equipment and gastronomic preparation of food 12. State exam: 1. Production technology, food quality and the common agricultural policy 2. Master's thesis 13. Traineeship (food businesses and mass caterers)
Optional subjects	I. year of study: 1. Foods of a specific nature 2. Radiobiology and food irradiation 3. Nutrition evaluation of foods 4. Water in the food industry II. year of study: 1. Food additives and additives 2. Food sales 3. Materials and articles in the food industry - Foodborne diseases
Internships abroad	Erasmus + CEEPUS VISEGRAD SCHOLARSHIP FOR MASTER'S AND POST-MASTER'S STUDENTS FROM VISEGRAD COUNTRIES
Student scientific conferences	Student Scientific Conference - ŠVOČ

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Bachelor's degree study program

Charakteristika studijního programu / Characteristics of the study program	
Name of the study program	**Food Safety and Quality**
Type of study program	Bachelor degree programme
Study form	Full-time
Standard length of study	3 years
Language of study	Czech/English
Awarded academic degree	Bachelor of Science (Bc.)
Area of education: Veterinary medicine, veterinary hygiene	
Web:	https://fvhe.vfu.cz/en/food-safety-and-quality

Objectives of the study in the study program

The aim of the bachelor's study program in the field of Food Safety and Quality is to prepare experts at the bachelor's level in the field of technology and hygiene of food of animal and plant origin, food analysis, ecological aspects in food production, distribution and sale and also in the application of legislation, control and supervision food. The bachelor's study program fulfils the content of European directives concerning the required education for veterinary assistants. They are qualified to use laboratory methods for the analysis and evaluation of food, especially with regard to the parameters proving the level of quality and safety of food.

Profile of a graduate of the study program	
Knowledge	Student possess the knowledge necessary to recognize the quality and safety of raw materials of animal and plant origin, know and is able to creatively use knowledge about the composition and structure of raw materials and foods, physical and colloidal properties of foods, chemical and microbiological processes occurring in foods and have knowledge in the field of quality and hygiene, analysis and control of food.
Skills	Student is able to actively assess the level of the conditions for the acquisition, production, processing, processing, storage, distribution and sale of food, be able to apply the procedures of good manufacturing, hygienic and laboratory practices in food companies and control laboratories, is able to take samples from the food handling environment and from food and understand their investigation and interpretation of the results of examinations at the level of qualitative and hygienic parameters and nutritional values.
Competences	Student is able to apply legislative and legal norms and regulations in the field of food industry, to apply economic procedures and principles of management and marketing in all areas falling within the food

	industry, is able to apply basic research techniques to the extent necessary to solve practical problems in the food industry.
Employment of graduates	The field of study Food Safety and Quality at the Bachelor's level of education prepares specialists - Bachelors for production companies in the food industry, for control or inspection institutions, for business or the performance of state administration.

Study rules and conditions: https://fvhe.vfu.cz/en/my-study (VFU Brno Study and Examination Regulations - Bachelor's and Master's study programme)
Proportion of compulsory and optional subjects: 100%
Min. number of credits obtained in the first semester for further study:
- for advancement to the 2nd year of study, they must obtain a total of at least 50 credits,
Duration of the trial period: 5/6 weeks

Conditions for admission to study
Students who have a full secondary education ending with a high school diploma and demonstrate the necessary competence for this study, can apply to study in the bachelor study program. The necessary competence for bachelor's studies is demonstrated by the results of studies at secondary school, as well as the result of the entrance exam, and activities beyond the basic secondary school studies (competitions, professional work, etc.) will also be taken into account.

Follow-up to other types of study programs (1st and 2nd degree study)
Food safety and quality (Following master study programme)

Optional subjects	
Mandatory parts of the study	Bachelor thesis

Compulsory subjects

Biology, The body structure of food animals, Ecology in Foodstuff Production, Good laboratory practice, General Gastronomy, Production of Plant-Based Food Raw Mater, BOZP and PO, English I, Sport
Wastes in Foodstuff Production and Gastronomy, Good hygiene and manufacturing practice, Food Production Engineering and Technology, Human Nutrition, Economics, Marketing, Management, Production of Animal-Source Foods, English II
Food Types and Composition, Foodstuff Labelling, Distribution and sale of foodstuffs, Food Chemistry and Biochemistry and Chemical Laboratory Methods, Disinfection, Disinfestation and Rodent Control in Food Processing Industry, BBachelor Thesis I - Methodology and Biostatistics
Sensory Analysis of Foodstuffs, Food microbiology and microbiological laboratory methods, Technology and hygiene of milk and milk product), Technology and hygiene of foodstuffs of plant origin 1, Hazards from food and meals, Bachelor Thesis II - Literature Review, Practice in the laboratory
Technology and hygiene of meat and meat products, Technology and hygiene of poultry, fish, game, eggs and honey, Technology and hygiene of foodstuffs of plant origin 2, Technology of Meals Preparation, Veterinary and Food Legislation, Food safety and control, Bachelor Thesis III
Practice in a food company, Bachelor Thesis IV, Technology and hygiene of the production of plant-based foods, Technology and hygiene of production of foodstuffs of animal origin,

Food Laboratory Analysis, Veterinary and food legislation, Safety and quality of food and meals	
Optional subjects	
Ecotoxicology, Hunting Game Management Non-traditional food sources, Beekeeping and bee products Regional Gastronomy, Fishery Foodstuff Instrumental Analysis, Diseases from food and meals Food Microscopy, Toxicology of foodstuffs and meals	
Internships abroad	Internal Mobility Agency
Student scientific conferences	Student scientific and professional activities conference

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Follow-up master's study program

Characteristics of the study program	
Name of the study program	**Food Safety and Quality**
Type of study program	Follow-up master's study program
Study form	Full-time
Standard length of study	2 years
Language of study	Czech/English
Awarded academic degree	Master (Mgr.)
Area of education	Veterinary medicine, veterinary hygiene
Web:	https://fvhe.vfu.cz/en/food-safety-and-quality-1
Objectives of the study in the study program The aim of the follow-up Master's study program Food Safety and Quality is to prepare experts at the evel of managers in the area of hygiene and technology of food of animal and plant origin, as well as in the area of food analysis, especially in terms of parameters demonstrating the level of health safety of food, and parameters demonstrating correct hygienic and production practice in food production and processing technology. Graduates are also prepared to work in the area of ecological aspects of production, distribution and sale of food and in the area of management, economics and production legislation.	
Profile of a graduate of the study program	
Knowledge	The follow-up Master's degree program Food Safety and Quality will provide graduates with professional knowledge and skills, particularly with an emphasis on legislation, supervision and control related to the issue of hygiene, technology and food safety and laboratory diagnostics
Skills	The graduate is able to check and assess food at a high level in terms of its quality and safety and is able to apply acquired knowledge and advanced research procedures to the extent that enables new original knowledge to be obtained in the food industry, as well as in related fields.
Competences	Can assess and use theories, concepts and methods in the field of food hygiene and technology processes taking place in the food, food analysis, food quality and health safety, with the exception of veterinary-medical issues, and was knowledgeable in legal regulations, economics, management and food marketing.
Employment of graduates	The field of study Food safety and quality in the subsequent master's degree of education prepares experts for the position of a manager in control, development and research workplaces of the food industry, food technologist, specialist in the management and control of quality and hygiene in food operations, in the distribution and sale of food, for

	control health safety and food quality, management of the operation of specialized analytical laboratories, consultancy and training in the field of food safety and quality and safety and quality management, in food safety and quality research, in teaching at universities or secondary schools, in the field of media communication related to safety issues and food quality, in international organizations and institutions dealing with food safety and quality

Study rules and conditions: https://fvhe.vfu.cz/en/my-study (VFU Brno Study and Examination Regulations - Bachelor's and Master's study programme)
Proportion of compulsory and optional subjects: 100%
Min. number of credits obtained in the first semester for further study:
- for advancement to the 2nd year of study, they must obtain a total of at least 50 credits,
Duration of the trial period: 5/6 weeks

Conditions for admission to study
Students who have completed their bachelor's degree in the study program Food Safety and Quality or a similar field apply to study in the follow-up master's study program. The necessary competence for subsequent master's studies is demonstrated in particular by the results of studies in the bachelor's study program and the results of the entrance exam.

Follow-up to other types of study programs (1st and 2nd degree study)
Doctoral study program

Study obligations

Mandatory parts of the study	Diploma thesis

Compulsory subjects

Environment and the food chain, Hygiene and Technology in the Production of Bakery Products, Hygiene and Technology of Starchy Raw materials, Oilseeds and Legumes, Sustainability in the food chain, Food Conservation, Diploma Thesis I, Technology an Hygiene of Honey and Bee Products, Technology and Hygiene of Fish, Molluscs and Crustaceans and Their Products, BOZP and PO, Laboratory analysis of vegetable foodstuffs,
Food biotechnology, Hygiene and Technology in the processing of Fruit, Vegetables, Mushrooms and Dry Fruits, Adulterations of Foodstuff and Meals, Hygiene and Technology of Sugar, Sweet stuff, flavouring agents and delicacies, Diploma Thesis II, Food Hygiene and Safety in Catering, Hygiene and Technology of Milk and Milk Products.
Legislation Supervision Over Food Law, Hygiene and technology in the storage, distribution and sale of food, Hygiene and technology in the production of meat products, Hygiene and technology in the production of alcoholic and non-alcoholic beverages, Food Safety During Extraordinary Event, Analysis of animal origin foodstuff, Food safety management systems and HACCP, Diploma Thesis III, Practice in Food Working, Diploma Thesis IV, Food Analysis, Legislation and Food Inspection, Hygiene and Technology of Meat and Meat Products, Hygiene and Technology of Milk and Milk Products, Hygiene and Technology of Plant Origin Foodstuffs.

Optional subjects

Accredited laboratory, Chemical Labortory Methods, Gastronomic Specialities, Innovation in the food industry, Processing of by-products and non-traditional products, Microbiological Laboratory Methods Biology and Molecular Biology Methods, Certification and audits in food industry, Interní auditor HACCP	
Internships abroad	Internal Mobility Agency
Student scientific conferences	Student scientific and professional activities conference

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Engineer 's study program (University of Agriculture in Krakow)

Characteristics of the study program	
Name of the study program	**Brewing and malting**
Type of study program	Practical
Study form	Daily
Standard length of study	3.5 academic years (7 semesters)
Language of study	Polish
Awarded academic degree	Bachelor of Engineering (Beng.)
Area of education	food technology and human nutrition
Web	https://wtz.urk.edu.pl/index/site/5574
Profile of a graduate of the study program	The educational program and its implementation are carried out with close consultation of the brewing and malting industry in order to ensure good preparation of our graduates for the labor market. The equipment base allows for detailed knowledge of technological processes, both theoretically and practically (acquiring professional skills during beer production in the microbrewery of the Department of Fermentation Technology and Technical Microbiology). The Faculty of Food Technology has been cooperating with industrial plants for many years, most diploma theses in the field of brewing are carried out for the needs of industry and often in industrial conditions
Skills	After graduating, the graduate has knowledge and skills in the field of brewing and malting technology, is a specialist in product design, basics of engineering and technology, quality control and hygiene maintenance in the production plant.
Competences	The graduate is prepared to work in engineering positions in plants producing beer (on a craft, regional and industrial scale) as well as malt and other brewing raw materials; knows the principles of market functioning and understands the principles of marketing products and services related to the planning and management of brewing production, and also knows formal and legal issues in this segment of business activity. The graduate also has instilled habits of continuing education, knows a foreign language and uses a specialized language related to the field of study.
Employment of graduates	A graduate of brewing and malting has the opportunity to find employment in all types of breweries, including:

	industrial, regional, craft, restaurant, as well as in plants preparing malt, enzymes or other raw materials and additives for brewing production. The graduate will be prepared to start their own business.
Study rules and conditions	The number of ECTS points necessary to complete studies at a given level is 210 . The total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes 126.3 The total number of ECTS points that a student must obtain as part of classes in the field of humanities or social sciences 5 Total number of hours of classes 2 229. Type, size, rules and form of the training internship: A total of 6 months of professional internship: - professional practice I (1 month after the first year, 6 ECTS), - professional practice II (2 months after the second year, 11 ECTS), - professional practice III (2 months after the third year, 11 ECTS) - professional practice IV (during the 7th semester, 1 month, 7 ETCS). Place, rules and form of training in accordance with the framework internship program, assessment rules and learning outcomes in accordance with the syllabus, depending on the chosen one Scope and form of the diploma examination: 8 ECTS - written diploma examination including verification of achievements learning outcomes in the field of activities related to practical preparation professional
Conditions for admission to study	Scope of the qualification procedure: Secondary school leaving certificate competition, weighted average, basic or advanced level; foreign language (weight 1) and 1 subject (weight 4) to choose from: biology, chemistry, physics with astronomy, mathematics. Winners and finalists of selected central level olympiads, national and international competitions are exempt from the qualification procedure. Olympiads included: biological, chemical, physical, IT, mathematics, statistics, technical knowledge, knowledge about nutrition and food, food knowledge, agricultural knowledge and skills in food technology blocks, gastronomy.
Follow-up to other types of study programs (1st and 2nd degree study)	After completing the Bachelor study, the graduate has the opportunity to continue their studies in the 2nd degree of university study in the follow-up Master study programme **Food Technology and Human Nutrition.**

Study obligations	The condition for regular completion of the study is the acquisition of 210 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study in the study programme and for its proper completion, including the conditions of examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Study Regulations of AU in Krakow.
Mandatory parts of the study	Diploma exam
Obligatory subjects	***Compulsory subjects*** 1. General and inorganic chemistry; 2. Information technology; 3. Mathematics with elements of statistics; 4. Chemical calculations; 5. Technological usefulness of plant raw materials in brewing; 6. Malt technology; 7. Ergonomics and work safety; 8. Organic chemistry; 9. Physics; 10. Engineering graphics; 11. Brewhouse processes; 12. Protection of intellectual property; 13. Foreign language; 14. Physical education; 15. Biochemistry; 16. Food microbiology; 17. General food technology; 18. Machines and equipment in malting and brewing; 19. Food chemistry; 20. Food quality analysis and assessment; 21. Analysis of the quality of raw materials, semi-finished products and brewing products; 22. Beer fermentation and maturation; 23. Bioprocess engineering; 24. Bioreactor engineering; 25. Hygiene in the brewery; 26. Ecology and environmental protection; 27. Beer bottling technology; 28. Hops and hop products; 29. Utilities in the malt house and brewery; 30. Designing new brewing products; 31. Automation, technology and process control in brewing; 32. Beer stabilization; 33. Beer sensory analysis; 34. Legal and economic aspects of brewery operation; 35. Designing and launching a brewery; 36. Economy;

	37. Accountancy; 38. Professional practice.
Optional subjects	***Elective subjects*** General beer technology; home brewing; history of brewing; philosophy; psychology; graphic design and visual communication; enzymes in brewing; auxiliary materials and waste management; physical chemistry; attitudes of food physical chemistry; basics of human nutrition; bromatology with elements of human nutrition; microbiology of fermentation industries; brewing microbiology; basics of production of carbohydrate industries; properties and uses of starch; dairy products as beer snacks; fermented dairy products; food freezing; refrigeration and food storage; enzymology; plant food biotechnology; technology of food concentrates; raw materials and semi-finished products in the food concentrates industry; production of traditional and modern cereal and flour products; grain processing technology; basics of wine production; distilling technology; special malts; innovative brewing raw materials; health aspects of beer; food toxicology; nutritional and anti-nutritional compounds in beer; basics of fruit, vegetable and mushroom processing; technology and hygiene of fruit and vegetable products; basics of production of meat products; production technology of meat and fish snacks; beer styles; beer and food; energy, water and sewage management; energy and water in the food industry; catering technology; customer service; food safety and quality management; atomic absorption spectrometry in food analysis; size exclusion chromatography (HPSEC) in the control of the beer production process; additives in food; production of juices, nectars and drinks from fruit and vegetables; technology of low-processed products from fruit and vegetables; functional food; analysis of bioactive components of cereal grains used in brewing; liquid chromatography in the analysis of brewing raw materials and semi-finished products; basics of food nanotechnology; promotional aspects of food packaging; traditional, regional and organic food as an alternative to conventional food; enrichment of food products; production of solid oils and fats; food adulteration; bioactive components of cereals and their role in brewing; fermented cereal drinks in a gluten-free diet; size exclusion chromatograph (HPSEC) in control of beer production; visible radiation in food analysis; modern methods of food adulteration detection.

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Innovation of the structure and content of study programs profiling food study fields with a view to digitizing teaching

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Inovácia štruktúry a obsahového zamerania študijných programov profilujúcich potravinárske študijné odbory s ohľadom na digitalizáciu výučby

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Engineer 's study program (University of Agriculture in Krakow)

Characteristics of the study program	
Name of the study program	**Dietetics**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3.5 academic years (7 semesters)
Language of study	Polish
Awarded academic degree	Bachelor of Engineering (BcEng.)
Area of education	food technology and human nutrition and health science
Web	https://wtz.urk.edu.pl/index/site/5575
Profile of a graduate of the study program	The education program in Dietetics is aimed at acquiring extensive knowledge in the field of nutrition for a healthy person and the nutrition of people affected by chronic non-communicable diseases, as well as acquiring the ability to plan rational nutrition of various population groups, design and prepare dishes included in individual diets, assess the diet and the condition of nutrition. Students participate in classes devoted to, among others, human anatomy, food chemistry, food hygiene and toxicology, food and food production hygiene, and nutritional education and health promotion. Graduates of studies in Dietetics are distinguished by in-depth knowledge in the field of health prevention, which allows them to organize individual and collective nutrition, as well as conduct nutritional education. Moreover, thanks to their education, they become specialists in the processing, preservation, storage and quality control of food and dishes. Therefore, a university diploma is a pass to work, among others, in health care facilities, dietary clinics or sports facilities.
Skills	The graduate has knowledge in the field of nutrition for healthy and sick people. Demonstrates the ability to plan rational nutrition of various population groups, design and prepare dishes included in individual diets, assess nutrition and nutritional status. In addition, he has knowledge in the field of preventive medicine, enabling the organization of

	individual and collective nutrition, adapted to age and health condition, and is also able to conduct nutritional education. The graduate also has knowledge in the field of food quality and safety.
Competences	The graduate has instilled habits of continuous learning, is able to use various computer programs, knows a foreign language and uses a specialized language related to the field of study. He is prepared to undertake second-cycle studies.
Employment of graduates	The graduate is prepared to work in mass catering establishments, public and non-public health care facilities, establishments supplying food to hospitals and other mass catering units, centers for the treatment of nutrition-related diseases, sports facilities and in vocational education (after completing appropriate pedagogical education).
Study rules and conditions	The number of ECTS points necessary to complete studies at a given level is 210. The total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes 126.12. The total number of ECTS points that a student must obtain as part of classes in the field of humanities or social sciences 6 Total number of hours of classes 2 492. The conditions for admission to the diploma examination at the University of Agriculture, the form of the examination and its scope are specified in the study regulations. The subject of the oral engineering diploma examination is the presentation of the diploma thesis and verification of the student's achievement of learning outcomes appropriate for this level of study. Details regarding the individual diploma stages are specified in the applicable Procedure for diploma diploma and diploma theses preparation by students of the Faculty of Food Technology (WTŻ) of the University of Agriculture, available on the Faculty's website. For the engineering diploma examination, the student receives 2 ECTS. Scope and form of the diploma thesis: The principles of diploma thesis are presented in the study regulations in the section "Diploma thesis", which generally defines the types of diploma theses, the rules for determining and approving the topics of these theses, the persons authorized to supervise theses, the rules for assessing theses and checking them using an anti-plagiarism program. and the deadlines applicable in this respect. Details of the individual diploma stages and the rules for preparing a diploma thesis are specified in the Procedure for diploma diploma and preparation of diploma theses by students of the Faculty of Food Technology (WTŻ) of the Hugo Kołłątaj Agricultural University in Krakow, available on the Faculty's website.

	For first-cycle studies at in the field of Dietetics, the diploma thesis is an engineering thesis. For preparing the engineering thesis paper, the student receives 5 ECTS.
Conditions for admission to study	Secondary school leaving certificate competition, weighted average, basic or advanced level; foreign language (weight 1) and 1 subject (weight 4) to choose from: biology, chemistry, physics with astronomy, mathematics. Winners and finalists of selected central level olympiads, national and international competitions are exempt from the qualification procedure. Olympiads included: biology, chemistry, physics, IT, mathematics, statistics, technical knowledge, nutrition and food knowledge, food knowledge, agricultural knowledge and skills in the following blocks: food technology, gastronomy.
Follow-up to other types of study programs (1st and 2nd degree study)	After completing the Bachelor study, the graduate has the opportunity to continue their studies in the 2nd degree of university study in the follow-up Master study programme **Food Technology and Human Nutrition or Dietetics.**
Study obligations	The condition for regular completion of the study is the acquisition of 210 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Study Regulations of URK in Krakow.
Mandatory parts of the study	Bachelor's thesis
Obligatory subjects	***Compulsory subjects*** 1. General and inorganic chemistry; 2. Mathematics with elements of statistics; 3. General psychology; 4. Ecology and environmental protection; 5. Qualified first aid; 6. Information technology; 7. Engineering graphics; 8. Organic chemistry; 9. Physics; 10. Human anathomy; 11. Foreign language; 12. Biochemistry; 13. Microbiology; 14. Food chemistry; 15. Packaging, storage and transport of food; 16. Technical equipment in food production; 17. Basics of human nutrition; 18. Food quality analysis and assessment;

	19. General food technology; 20. Genetics; 21. Food hygiene and toxicology; 22. Basics of dietetics; 23. Human physiology; 24. Hygiene of food production and nutrition; 25. Process engineering; 26. Pediatric dietetics; 27. Geriatric dietetics; 28. Sports nutrition; 29. Clinical outline of diseases; 30. Principles and organization of collective catering; 31. Technological design of food production processes; 32. Law and economics in health care; 33. Nutrition education and health promotion; 34. Food safety systems; 35. Food quality management systems; 36. Ergonomics and work safety; 37. Pharmacology and pharmacotherapy; 38. Parasitology; 39. Protection of intellectual property; 40. Physical education; 41. Basics of immunology.
Optional subjects	***Elective subjects*** professional practice; history of art and Polish culture; philosophy; effective learning methods and personal development; psychodietetics; basics of professional ethics of a dietitian; electives in the field of nutritional aspects of carbohydrate processing; elective in the field of raw materials and technologies used in fruit and vegetable processing; water treatment elective in the food industry; elective in the field of basics of catering technology and consumer service; elective in the field of food biotechnology; elective in the field of unconventional food; elective in the field of milk processing and dairy products in human nutrition; elective on the basics of alcoholic beverage production; electives in the field of nutritional aspects of grain processing; elective in the field of meat processing and meat products in human nutrition; elective in the field of refrigeration application in food production and storage; elective in the field of food concentrate technology; electives in the field of development of new food products; proseminar and introduction to data analysis; diploma seminar.

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Engineer 's study program (University of Agriculture in Krakow)

Characteristics of the study program	
Name of the study program	**Food technology and human nutrition**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	3.5 academic years (7 semesters)
Language of study	Polish
Awarded academic degree	Bachelor of Engineering (Beng.)
Area of education	food technology and human nutrition
Web	https://wtz.urk.edu.pl/index/site/5573
Profile of a graduate of the study program	The aim of students studying food technology and human nutrition is to educate specialists in food processing, preservation, storage and quality control. Students learn to organize production, including the selection of machines and equipment, as well as conduct economic calculations, as well as learn the principles of market functioning and the principles of marketing products and services related to food and human nutrition. Students can choose from 4 didactic paths during their studies: Food Technology Human Nutrition Food biotechnology Food quality and safety.
Skills	The graduate has knowledge and skills in the field of food technology and human nutrition as well as technical and economic sciences. He is a specialist in food processing, preservation, storage, quality control and ensuring its safety. Knows how to organize production, including the selection of machines and equipment, and perform its economic calculation. He knows the principles of marketing, food law and the principles of proper human nutrition. Knows how to use computer technology in managing technological processes. The graduate has acquired the habits of continuing education, knows a foreign language and uses a specialized language

	related to the field of study. He is prepared to undertake second-cycle studies.
Competences	A graduate of this field is prepared to work in engineering positions in food industry enterprises, in plants dealing with the acquisition, storage and distribution of food and human nutrition, as well as in vocational education (after completing appropriate pedagogical education).
Employment of graduates	A graduate of the field of Food Technology and Human Nutrition is prepared to work, among others: in: food industry enterprises and plants, including plants dealing with the acquisition, production, storage and distribution of food and human nutrition. Graduates find employment as chief technologists in industrial plants, work in laboratories testing food quality, but also set up their own companies producing or distributing food. Graduates can also find employment in vocational education (after completing appropriate pedagogical education).
Study rules and conditions	The number of ECTS points necessary to complete studies at a given level is 210. The total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes min. 106 (for full-time studies) and 74,73 (for part-time studies). The total number of ECTS points that a student must obtain as part of classes in the field of humanities or social sciences 7 (for full-time studies) and 9 (for part-time studies). Total number of hours of classes 2482 (for full-time studies) and 1542 (for part-time studies). The conditions for admission to the diploma examination at the University of Agriculture, the form of the examination and its scope are specified in the study regulations. The subject of the oral engineering diploma examination is the presentation of the diploma thesis and verification of the student's achievement of learning outcomes appropriate for this level of study. Details regarding the individual stages of diploma are specified in the applicable Procedure for diploma and preparation of diploma theses by students of the Faculty of Food Technology (WTŻ). University of Agriculture available on the Faculty's website. For the engineering diploma examination, the student receives 2 ECTS. Scope and form of the diploma thesis: The principles of diploma thesis are presented in the study regulations in the section "Diploma thesis", which generally defines the types of diploma theses, the rules for determining and approving the topics of these theses, the persons authorized to supervise theses, the rules for assessing theses and checking them using an anti-plagiarism program. and the deadlines applicable in this respect. Details of the individual diploma stages and the rules for preparing a diploma thesis are specified in the

	Procedure for diploma diploma and preparation of diploma theses by students of the Faculty of Food Technology (WTŻ) of the Hugo Kołłątaj Agricultural University in Krakow, available on the Faculty's website. For first-cycle studies at in the field of Dietetics, the diploma thesis is an engineering thesis. For preparing the engineering thesis, the student receives 5 ECTS.
Conditions for admission to study	Secondary school leaving certificate competition, weighted average, basic or advanced level; foreign language (weight 1) and 1 subject (weight 4) to choose from: biology, chemistry, physics with astronomy, mathematics. Winners and finalists of selected central level olympiads, national and international competitions are exempt from the qualification procedure. Olympiads included: biology, chemistry, physics, IT, mathematics, statistics, technical knowledge, nutrition and food knowledge, food knowledge, agricultural knowledge and skills in the food technology, gastronomy blocks
Follow-up to other types of study programs (1st and 2nd degree study)	After completing the Bachelor study, the graduate has the opportunity to continue their studies in the 2nd degree of university study in the follow-up Master study programme **Food Technology and Human Nutrition or Dietetics.**
Study obligations	The condition for regular completion of the study is the acquisition of 210 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Study Regulations of URK in Krakow.
Mandatory parts of the study	Bachelor's thesis
Obligatory subjects	***Educational path - food technology, human nutrition, food biotechnology and food quality and safety*** general and inorganic chemistry; organic chemistry; information technology; mathematics with elements of statistics; economics of food businesses; economy; ecology and environmental protection; chemical calculations; technological usefulness of plant raw materials in food production; technological usefulness of animal raw materials in food production; engineering graphics; physics; foreign language; biochemistry; food chemistry; machine science; general food technology; food microbiology; food quality analysis and assessment; packaging, storage and transport of food; chemical instrumental analysis; process engineering; food law; organization and management; accountancy; ergonomics and

	work safety; protection of intellectual property; physical education; practice.
Optional subjects	***Elective subjects:*** ***Educational path - food technology:*** history of art and Polish culture; philosophy; psychology; effective learning methods and personal development; culinary heritage: culture, identity, innovation; food hygiene and toxicology; basics of human nutrition; energy, water and sewage management; basics of electronics and automation; elective in the field of food production hygiene; food biotechnology; fermented and unfermented drinks; elective in the field of carbohydrate technology; milk processing elective; elective in the field of alcoholic beverage production; elective in the field of fruit, vegetable and mushroom processing; elective in the field of grain processing technology; elective in the field of technology of selected raw materials of animal origin; elective in the field of catering technology and consumer service; elective in the field of developing new food products; electives regarding the use of low temperatures in food production and storage; elective in the field of food concentrate technology; food safety and quality management; alternatives: non-nutritional use of milk components; the role of food in history - food over the centuries; technology of production of confectionery products; shaping the quality of food products; carbohydrate and protein biopolymers in food technology; selected mathematical models in biology; regional bread; professional practice; proseminar and introduction to data analysis; diploma seminar. ***Educational path – human nutrition:*** history of art and Polish culture; philosophy; psychology; effective learning methods and personal development; culinary heritage: culture, identity, innovation; food toxicology; human anathomy; human Nutrition; energy, water and sewage management; elective in the field of food production hygiene; human physiology; elective in the field of carbohydrate technology; milk processing elective; elective in the field of alcoholic beverage production; elective in the field of fruit, vegetable and mushroom processing; elective in the field of grain processing technology; elective in the field of technology of selected raw materials of animal origin; elective in the field of catering technology and consumer service; elective in the field of developing new food products; electives regarding the use of low temperatures in food production and storage; elective in the field of food concentrate technology; food safety and quality management; elective in the field of food economy; technological equipment with technical elements; elective in the field of basic dietetics; introduction to food biotechnology; professional practice; proseminar and introduction to data analysis; diploma seminar. ***Educational path – food biotechnology:***

	history of art and Polish culture; philosophy; psychology; effective learning methods and personal development; culinary heritage: culture, identity, innovation; elective in the field of food hygiene and toxicology; human nutrition with elements of bromatology; physical chemistry of biopolymers; enzymology; plant and animal cell physiology; elective in the field of environmental protection biotechnology; elective in the field of food production hygiene; law and ethics in biotechnology; electives in the field of basic electronics and automation; food biochemistry; basics of food biotechnology; cell biology; general genetics; elective in the field of carbohydrate technology and grain processing; elective in the field of alcoholic beverage production; elective in the field of fruit, vegetable and mushroom processing; elective in the field of biotechnology in the processing of animal raw materials; elective in the field of catering technology and consumer service; electives in the field of the use of low temperatures in food production and storage and food concentrate technology; food safety and quality management; elective in the field of industrial biotechnology; electives in the field of biotransformation, bioremediation and bioindication; bioreactor engineering; elective in the field of genetic engineering; elective in the field of transgenic food; elective in the field of industrial microbiology; professional practice; proseminar and introduction to data analysis; diploma seminar; basics of catering technology; catering technology with customer service elements; principles of developing new food products; production of new food products; food refrigeration and freezing; raw materials and products in the food concentrate industry; food safety and quality management. ***Educational path – food quality and safety:*** history of art and Polish culture; philosophy; psychology; effective learning methods and personal development; culinary heritage: culture, identity, innovation; elective in the field of quality and safety of food of plant origin; elective in the field of basics of human nutrition; elective in the field of technology and hygiene of food production; elective in the field of quality and safety of milk, meat and their products; elective in the field of alcoholic beverage production; elective in the field of quality and safety of fruit and vegetable products; elective in the field of safety and quality in the development of new food products; elective in the field of safety and quality of refrigerated and frozen food and food concentrates; food quality management systems; food safety management systems; food additives; food authenticity and adulteration; protecting public health; molecular basis of genetic modification of food; safety standards in the production of primary raw materials; elective in physical chemistry; basics of food toxicology; sensory quality of food; allergens in food; elective in the field of food fat technology; veterinary and sanitary inspection of food; Eletywy: carbohydrate and protein biopolymers in the production of safe food; sweeteners; food history – food

	through the centuries; the secret of herbs and spices used in the kitchen; gluten-free bread - production technology, nutritional value, role in the treatment of celiac disease; food labeling; traditional, regional and organic food as an alternative to conventional food; selected mathematical models in biology; professional practice; proseminar and introduction to data analysis; diploma seminar.

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Masters's study program (University of Agriculture in Krakow)

Characteristics of the study program	
Name of the study program	**Food technology and human nutrition**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	1.5 academic years (3 semesters) for full-time studies and for part-time studies
Language of study	Polish
Awarded academic degree	Master of Science (MSc)
Area of education	food technology and human nutrition
Web	https://wtz.urk.edu.pl/index/site/5578
Objectives of the study in the study program	
Profile of a graduate of the study program	A graduate of Food Technology and Human Nutrition has knowledge and skills in the field of food technology and human nutrition as well as technical and economic sciences. He is a specialist in the processing, preservation, storage and control of food quality and ensuring its safety. Is prepared to work in engineering positions in food industry enterprises, in plants dealing with the acquisition, storage and distribution of food and human nutrition, as well as in vocational education (after completing appropriate pedagogical education). He is able to organize production, including the selection of machines and devices, as well as perform economic calculations. The graduate has qualifications in the field of nutrition for healthy people and those at risk or affected by chronic non-communicable diseases. Has knowledge in the field of preventive medicine, enabling the organization of individual and collective nutrition, adapted to age and health, as well as conducting nutritional education. Knows the principles of market functioning and understands the principles of marketing products and services related to food and human nutrition. Is able to use computer technology to control technological processes and manage an enterprise. The graduate has instilled habits of continuing education, knows a foreign language and can use a specialized language related to the field of study. At the second stage of full-time master's studies, it is possible to study in English.
Skills	The graduate has the ability to use advanced knowledge in the field of food chemistry, technical, technological and economic sciences as well as human nutrition. He is a specialist in food processing, preservation and storage, as well as product design

	and ensuring its high quality. Knows the principles of proper human nutrition and marketing as well as food law. Knows how to use computer technology to control technological processes and manage an enterprise. The student completes a diploma internship and conducts independent research for his diploma thesis, the subject of which is often a real problem faced by food producers and companies in this industry. Thanks to this, he not only has the opportunity to verify his knowledge and skills and compare them with the employer's expectations, but also has to learn to think cross-sectionally, look for information necessary to solve problems and predict the consequences of his actions.
Competences	A graduate of this field is prepared to work in engineering and managerial positions in food processing enterprises, in plants dealing with the acquisition, storage and distribution of food and human nutrition. Is able to organize production, including the selection of machines and devices, and carry out economic production calculations.
Employment of graduates	A graduate of food technology and human nutrition is prepared to work, among others: in: food industry enterprises and plants, including plants producing, storing and distributing food. Graduates find employment as food technology specialists; they work in quality control and product certification laboratories, control and measurement units, official food control institutions, but also set up their own companies producing or distributing food. Graduates can also find employment in vocational education (after completing appropriate pedagogical education).
Study rules and conditions	The number of ECTS points necessary to complete studies at a given level is 90 for full-time studies and for part-time (extramural) studies. The total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes is 47,26 for full-time studies or 34,1 for part-time studies. The total number of ECTS points that a student must obtain as part of classes in the field of humanities or social sciences 5 for full-time studies and for part-time (extramural) studies. Total number of hours of classes is 936 for full-time studies or 592 for part-time studies. During their studies, students choose the so-called "specialization blocks": – Specialization block A: Dietetics – Specialization block B: Food hygiene and toxicology – Specialization block C: Catering technology – Specialization block D: Analysis and assessment of food quality – Specialization block E: Food bioanalysis

	– Specialization block F: Refrigeration and food storage – Specialization block G: Food engineering – Specialization block H: Meat processing – Specialization block J: Milk processing – Specialization block K: Fruit and vegetable processing – Specialization block L: Technology of bakery and other cereal products – Specialization block M: Carbohydrate technology – Specialization block N: Fermentation and beverage technology – Specialization block O: Traditional and modern technologies in grain and carbohydrate processing – Specialization block P: Processing of animal raw materials – Specialization block R: Quality and safety of food products – Specialization block S: Technology of food concentrates and storage – Specialization block Z: Food Technology and Human Nutrition The conditions for admission to the diploma examination at the University of Agriculture, the form of the examination and its scope are specified in the study regulations. The subject of the oral engineering diploma examination is the presentation of the diploma thesis and verification of the student's achievement of learning outcomes appropriate for this level of study. Details regarding the individual diploma stages are specified in the applicable Procedure for diploma and diploma thesis preparation by students of the Faculty of Food Technology (WTŻ) of the University of Agriculture, available on the Faculty's website. For the Master's diploma examination, the student receives 2 ECTS. Scope and form of the diploma thesis: The principles of diploma thesis are presented in the study regulations in the section "Diploma thesis", which generally defines the types of diploma thesis, the rules for determining and approving the topics of these thesis, the persons authorized to supervise thesis, the rules for assessing thesis and checking them using an anti-plagiarism program. and the deadlines applicable in this regard. Details of the individual stages of diploma diploma work and the rules for preparing a diploma thesis are specified in the Procedure for diploma diploma work and preparation of diploma thesis by students of the Faculty Food Technology (WTŻ) of the Agricultural University Hugona Kołłątaj in Kraków available on the Faculty's website.

	Learning outcomes are included in the course syllabus. In second-cycle studies in Food technology and human nutrition, the diploma thesis is a master's thesis. For preparing a master's thesis, the student receives 7 ECTS.
Conditions for admission to study	Recruitment is based on the grade specified in the graduation diploma, and if it is inconclusive - additionally on the basis of the arithmetic mean of the grades shown in the supplement.
Follow-up to other types of study programs (1st and 2nd degree study)	brewing and malting (AUK); dietetics (AUK); food quality and safety (AUK); food technology and human nutrition (outside AUK)
Study obligations	The condition for regular completion of the study is the acquisition of 90 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Study Regulations of AU in Krakow.
Mandatory parts of the study	Master's thesis
Obligatory subjects	***Compulsory subjects*** 1. Basics of entrepreneurship; 2. Applied Computer Science; 3. Applied statistics; 4. Foreign language; 5. New trends in food processing and preservation; 6. Population feeding policy; 7. Nutrigenomics; 8. Packaging, storage and transport of food; 9. Communication in management; 10. Law and economics in environmental protection.

Optional subjects	***Facultative subjects*** Selected issues of enzymology in the processing of raw materials of plant and animal origin; enzymes in food technology; dietetics; food for special purposes; bromatology; toxicology; functional products in gastronomy; nutrition in agritourism; sensory analysis in food quality testing; food quality and safety; biological active food ingredients; modern analytical techniques in biotechnology; refrigeration technology and storage; refrigeration processing technique; basics of technological processes in food production; mechanical and textual properties of raw materials and food products; quality and safety of meat, fat and egg raw materials; meat processing; milk and milk concentrates; milk fat, fermented drinks and ice cream; raw materials and auxiliary materials in fruit and vegetable processing; technology for the production of canned fruit and vegetables; modern methods of storage and production of cereal and flour products; milling and starch technology; starch and sugar industry; confectionery technology; microbiology of fermentation industries; malt and beer technology; nutrition assessment; selected issues in nutritional treatment; parasitology; cell cultures in nutritional research; basics of nutritional treatment; experimental statistical data analysis; dietary prevention; cell cultures in food toxicology; modern culinary methods in dietetics; food production technology and hygiene; nutrition education; regional culinary attractions; basics of food biophysics; food enzymes and their analytics; bacteria and filamentous fungi in traditional fermentations in a solid medium; traditional fermentations of Africa and the Far East; Detailed technologies of refrigeration treatment and storage; technological lines in food industry plants; calculations in planning technological processes in the food industry; selected issues in food engineering of products based on protein raw materials; elements of process dynamics; analytical methods used in food engineering; poultry, egg and fish processing; home-made meats; quality characteristics and technological suitability of eggs; cheese technology; regional dairy products; ice cream production; food adulteration; edible mushroom processing technology; soft drink production technology; technology for the production of lightly processed fruit and vegetables; baking technology; gluten-free bread - production technology, nutritional value, role in the treatment of celiac disease; cereal carbohydrates as a superfood ingredient; potato processing; chromatographic methods of saccharide analysis; cyclodextrins; polysaccharides – modern food ingredients; technology of alcoholic and non-alcoholic beverages; antioxidants and biostimulants in food and beverages; classes on culture, art and tradition of the region; pathophysiology; dietary prevention, nutritionally-related non-communicable diseases; pharmacology and pharmacotherapy; modern culinary methods in dietetics; nutritional treatment in selected diseases; cell cultures in nutritional research; food for

	special purposes; nutrition and health, chronic non-communicable diseases; cell cultures in food toxicology; organization of collective catering in hospitals; food allergies; instrumental methods in the analysis of food contamination; bioactive compounds in food – benefits and threats; biologically active compounds in food; spectroscopic methods in food analytics; spectroscopic assessment of food quality; introduction to selected molecular biology techniques; introduction to DNA manipulation techniques; biotechnology in vitamin production and analysis; methods of enriching food with vitamins; air cooling and freezing; heat and mass transfer processes in humid air; durability and storage of food; chemical and biological aspects of food storage stability; modeling of mass and heat transfer processes; food products and waste as alternative, renewable chemical raw materials; elements of process dynamics; food raw materials in cosmetics; sanitary and veterinary rules in the production of meat and meat products; meat and poultry products; quality characteristics and technological suitability of eggs; hygiene of meat and meat products; non-nutritional use of milk components; technology of spreads; genetically modified food; edible mushroom processing technology; soft drink production technology; technology for the production of lightly processed fruit and vegetables; cereal proteins - characteristics and importance in food; technology of production of confectionery products; oats, processing and health benefits; antioxidants of starch raw materials; preventive aspects of cereals and their products; modern methods of bread production using traditional and gluten-free sourdoughs; cereal processing; basics of producing traditional and gluten-free sourdoughs; carbohydrate and protein biopolymers in food technology; technology of production of confectionery products; sweeteners; biological weapons and bioterrorism; biotoxins in food; xenobiotics in food; addiction to natural and synthetic substances; microbiological diagnostics; physical chemistry of macromolecular food carbohydrates; modern aspects of carbohydrate chemistry and technology.

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Masters's study program (University of Agriculture in Krakow)

Characteristics of the study program	
Name of the study program	**Dietetics**
Type of study program	Academically oriented
Study form	Daily
Standard length of study	1.5 academic years (3 semesters) for full-time studies or 2 academic years (4 semesters) for part-time studies
Language of study	Polish
Awarded academic degree	Master of Science (MSc)
Area of education	food technology and human nutrition and health science
Web	https://wtz.urk.edu.pl/index/site/5580
Profile of a graduate of the study program	The education program in Dietetics is aimed at acquiring extensive knowledge in the field of nutrition for a healthy person and the nutrition of people affected by chronic non-communicable diseases, as well as acquiring the ability to plan rational nutrition of various population groups, design and prepare dishes included in individual diets, assess the diet and the condition of nutrition. Students participate in classes devoted to, among others, human anatomy, food chemistry, food hygiene and toxicology, food and food production hygiene, and nutritional education and health promotion. Graduates of studies in Dietetics are distinguished by in-depth knowledge in the field of health prevention, which allows them to organize individual and collective nutrition, as well as conduct nutritional education. Moreover, thanks to their education, they become specialists in the processing, preservation, storage and quality control of food and dishes. Therefore, a university diploma is a pass to work, among others, in health care facilities, dietary clinics or sports facilities.
Skills	A dietetics graduate acquires qualifications in the field of nutrition for healthy people and those at risk or affected by chronic non-communicable diseases. Has knowledge and skills in the field of health prevention enabling the organization of individual and collective nutrition, adapted to age and physiological condition, as well as conducting nutritional education. The graduate knows a foreign language and uses a specialized language related to the field of study.
Competences	A graduate of this field is also a specialist in the processing, preservation, storage and quality control of food and dishes. He is able to organize production, including the selection of machines and devices, as well as perform economic calculations. Knows the principles of market functioning and understands the principles of

	marketing products and services related to food and human nutrition. Is able to use computer technology in planning the nutrition of various food groups and assessing the diet and nutritional status, as well as controlling technological processes and enterprise management.
Employment of graduates	The graduate is prepared to work as a dietitian in health care facilities, catering, dietary clinics, as well as in engineering positions in enterprises, plants and institutions dealing with food processing, control and trade, with particular emphasis on dietary products/dishes, centers treatment of nutrition-related diseases, sports facilities and vocational education (after completing appropriate pedagogical education).
Study rules and conditions	The number of ECTS points necessary to complete studies at a given level is 90 for full-time studies or 120 for part-time studies. The total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes is 52,60 for full-time studies or 50,44 for part-time studies. The total number of ECTS points that a student must obtain as part of classes in the field of humanities or social sciences 5 for full-time studies or 6 for part-time studies. Total number of hours of classes is 982 for full-time studies or 1 096 for part-time studies. The conditions for admission to the diploma examination at the University of Agriculture, the form of the examination and its scope are specified in the study regulations. The subject of the oral engineering diploma examination is the presentation of the diploma thesis and verification of the student's achievement of learning outcomes appropriate for this level of study. Details regarding the individual diploma stages are specified in the applicable Procedure for diploma diploma and diploma theses preparation by students of the Faculty of Food Technology (WTŻ) of the University of Agriculture, available on the Faculty's website. For the Master's diploma examination, the student receives 2 ECTS. Scope and form of the diploma thesis: The principles of diploma thesis are presented in the study regulations in the section "Diploma thesis", which generally defines the types of diploma theses, the rules for determining and approving the topics of these theses, the persons authorized to supervise theses, the rules for assessing theses and checking them using an anti-plagiarism program. and the deadlines applicable in this regard. Details of the individual stages of diploma diploma work and the rules for preparing a diploma thesis are specified in the Procedure for diploma diploma work and preparation of diploma theses by students of the Faculty Food Technology (WTŻ) of the Agricultural University Hugona Kołłątaj in Kraków available on the Faculty's website.

	Learning outcomes are included in the course syllabus. In second-cycle studies in Dietetics, the diploma thesis is a master's thesis. For preparing a master's thesis, the student receives 7 ECTS.
Conditions for admission to study	Recruitment is based on the grade specified in the graduation diploma, and if it is inconclusive - additionally on the basis of the arithmetic mean of the grades shown in the supplement.
Follow-up to other types of study programs (1st and 2nd degree study)	Related fields - none
Study obligations	The condition for regular completion of the study is the acquisition of 90 or 120 credits, which also includes credits for the preparation and defense of the final thesis. Other conditions that the student must meet during the study of the study programme and for its proper completion, including the conditions of examinations, rules for repeating studies and rules for extension, interruption of studies are specified in Study Regulations of URK in Krakow.
Mandatory parts of the study	Master's thesis
Obligatory subjects	***Compulsory subjects*** 1. Demography and nutritional epidemiology; 2. Clinical nutrition; 3. Experimental and statistical data analysis; 4. Laboratory diagnostics; 5. Applied computer science; 6. Foreign language; nutrition assessment; 7. Clinical psychology; 8. Immunology; 9. Nutrition education and counseling; 10. Nutrition of pregnant and breastfeeding women and infants; 11. Nutrition assessment; 12. Experimental research methods; 13. Clinical pathophysiology; 14. Management and Marketing; 15. Public health; 16. Basics of entrepreneurship; 17. Principles and organization of collective catering and nutrition in hospitals.

Optional subjects	***Facultative subjects*** Food for special purposes; foodstuffs for special medical purposes; dietetics; dietary management in selected diseases; technology and hygiene of production of dietary dishes; planning and organization of dietary nutrition - nutritional, technological and hygienic aspects; functional products in dietary nutrition; the use of health-promoting ingredients and products in the production of dietary dishes; classes on culture, art and tradition of the region; cell cultures in nutritional research, cell cultures in dietary research; modern culinary methods in dietetics; health-promoting properties of animal products; nutritional treatment in selected diseases; the secret of spice plants and herbs used in the kitchen; innovative solutions in food packaging; spectroscopic analysis of food quality; additives and food enrichment; safety and quality systems in food production and trade; safety and quality systems in the food chain; physical properties and food quality; selected analytical methods in assessing food quality and safety; home and industrial sushi production; nutritional genomics; nutrigenomics; allergens in food; immunological basis of allergic reactions; food storage; securing food shelf life; new trends in food packaging.

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