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It is brought to your kind notice that information which is below could be changed according to unforeseen circumstances.

2026/2027 study year, SPRING SEMESTER

COURSE TITLE	ECTS CREDITS	SUMMARY
Study programme APPLIED CHEMICAL ANALYSIS		
Biotechnology	3	The main fields of biotechnology science are analyzed, and the most important branches of the biotechnology industry and their products are described. An introduction to recombinant technologies (cloning, PCR reaction) and protein synthesis in eukaryotic and prokaryotic cells is provided. During practical sessions, students will be demonstrated prokaryotic cell transformation, recombinant protein synthesis in E. coli cells, analysis of synthesis results, and protein fractionation under denaturing conditions using polyacrylamide gel electrophoresis.
Practice in a company	20	Normative documents, research methodologies, technical characteristics of laboratory equipment, equipment used in practical work are analysed. Theoretical material is collected, systematized and analysed according to the possible methods of analyte detection and determination in the experimental part of the final work topic, the possibilities of using the methods are evaluated, chemical experiments are performed using different methods, the optimal analysis method is selected. Tools and materials for selected analysis are prepared. Chemical/biochemical analysis is planned and performed according to the chosen topic of the final work. The results of the analysis are presented and evaluated, the quality parameters of the chemical analysis are determined, the factors influencing the magnitude of the uncertainty of the analysis results are identified. Laboratory, fire and human and nature safety are described.
Biochemistry	4	The subject of biochemistry, its research areas, and objectives are examined. Knowledge is provided about water in biological systems, bioenergetics of living systems, the structure and biological function of nucleic acids. The structure and biological function of proteins are discussed, along with knowledge about protein biosynthesis in cells, proteins performing specific functions, and enzyme classification. Enzyme reaction kinetics are explained, and enzymes modifying nucleic acids are described. Knowledge is provided about the structure, distribution, and biological functions of carbohydrates and lipids. Knowledge is provided about biologically active compounds, their physical and chemical properties. The origin, structure, and significance of biologically active compounds are discussed. Methods for isolating biologically active compounds are examined, and their qualitative and quantitative content in various matrices is assessed.
Study programme LANDSCAPE DESIGN		
Ornamental Plants in Green Spaces	6	The course focuses on the identification and application of ornamental herbaceous plants in landscape plantings. It covers the main groups of herbaceous plants, their characteristics, growing conditions, and principles of plant selection and combination. Traditional, naturalistic, sustainable, and low-maintenance plantings are analysed, with emphasis on seasonality and biodiversity.
Environmental Engineering	8	The course introduces students to the principles of sustainable environmental engineering design. Students will acquire knowledge about site analysis, planning of environmental engineering elements and green spaces, and the use of trees, shrubs, and herbaceous plants as integral components of environmental engineering. The course covers the integrated application of landscape architecture and engineering sciences, the use of construction materials and recycled raw materials, as well as the implementation of green infrastructure solutions and technologies.
Creating Green Infrastructure 2	5	The course focuses on the planning and design of green infrastructure at different spatial scales. Students analyze green territorial frameworks, the structure and functions of green infrastructure elements, and their integration into urban landscapes. Particular attention is given to spatial composition, ecological connectivity, ecosystem services, and the design of small urban green spaces. Good practice examples from Lithuania and other European countries are analysed. Through practical assignments, students learn to assess existing conditions and develop functional, sustainable, and aesthetically coherent green infrastructure solutions.
Landscape Structures and Installations	6	Practical skills are improved by preparing original projects for the selection of green structures and equipment, as well as technical drawings and specifications. By providing knowledge about the construction structures of green structures and equipment from certain materials or products, the features of the use of these structures, and the technology of construction processes. By developing the ability to rationally select durable materials and products when designing the construction structures or layers to be installed for green structures and equipment.
Field Practice	6	The field practice is designed to develop students' knowledge and assessment skills related to ornamental herbaceous and woody plants in natural and urban environments. During the practice, students learn to identify plants and assess their biological, ecological, and ornamental characteristics, growing conditions, condition, and potential uses in green spaces. The relationship between plant selection and site conditions, as well as plant functions and the principles of plant combinations in green spaces, is analysed.

Practice of Computer Design	5	Students will learn to create and edit landscape visualizations using SketchUp and Lumion software, applying various materials, textures, and lighting effects. They will be able to produce realistic animations and video presentations, applying creative and innovative solutions in their visualizations. Students will also gain skills in clearly and persuasively presenting their work, preparing it in different formats according to client needs.
Study programme FOOD TECHNOLOGY		
Food Safety and Quality	4	EU and Lithuanian legislation, general, mandatory, veterinary, food safety, and quality requirements are analysed. The self-control system and principles, food labelling, food storage and transportation requirements, and the product detention and withdrawal program are reviewed.
General Technological and Food Quality Practical Training	10	In the company where the practice is performed, students get acquainted with food industry activities, improve professional skills by working in production units, examine different stages of food production and technological parameters, familiarize with the equipment, raw materials, finished product quality, hygiene and sanitation requirements.
Environmental Protection and Sustainable Production	4	The aim of the module is to introduce students to the environmental factors and their impact on the key components of the environment, pollution sources and ways to reduce them. Students analyse the environmental, labour and civil protection legislation, safety issues at the enterprise, as well as work safety of technological processes. While studying the module students are introduced to the basics of law, legal regulation mechanism, they are taught to handle constitutional, administrative, civil, criminal and labour law issues, and apply laws and regulations in practice.
Study programme VETERINARY MEDICINE		
Animal Obstetrics and Reproduction	5	Students are introduced to large animal obstetrics and gynecology as a discipline. It examines the physiology and pathology of the genital organs. Methods of treatment of genital diseases, sanitary and hygienic measures during childbirth, first aid, management of croup are discussed. Students are also introduced to new biotechnological methods (insemination, fertilization in vitro, in vivo, embryo transplantation, genomic research). Introduction to male andrological diseases and treatment methods. The work with clinic equipment is analyzed, the diagnosis of the genital system by various methods is discussed, and the technique of simple obstetric operations is discussed. Gynecological examination.
Fundamentals of Microbiology and Biosafety	3	The morphology, physiology and prevalence of microorganisms in nature and infectious diseases caused by them are reviewed. Methods for diagnosing these diseases and preventive measures are shown.
Care and Husbandry of Farm Animals	6	The study program examines the principles of health care, prevention and organization of care for farm animals. Students are taught to recognize sick animals, perform an initial assessment of their condition, provide first aid and, upon the instruction of a veterinarian, perform clinical diagnostic and therapeutic procedures. It also focuses on the preparation of farm animals for examinations and procedures, work planning on the farm and the application of primary differential diagnostics. Practical skills are developed to ensure the health and well-being of animals and the effective organization of work in a farm environment.
Parasitology	4	The morphology, physiology and distribution of parasites in nature are reviewed, and invasive diseases caused by them are analyzed. Methods of diagnosing these diseases and preventive measures are demonstrated.
Pharmacology and Drug Administration	5	The groups of preparations used in veterinary medicine are reviewed, the principles of action of pharmaceuticals are analyzed and the methods of pharmaceuticals delivery to the animal are demonstrated.
Pet Nursing Professional Practice	10	The technique of performing small animal surgical and obstetric operations is analyzed. Animal fixation techniques are and drug delivery techniques are presented. Evaluation of diagnostic methods are analyzed, small animal species, varieties, their needs are reviewed.