

VTE425 Milk Hygiene and Technology

Faculty of Veterinary Medicine – Compulsory course

Credit: 2 ECTS: 2



Course Description: This course provides students with a comprehensive understanding of milk chemistry, milk microbiology, diseases transmitted by milk and dairy products, adulteration with foreign substances in milk, and the acquisition of healthy and hygienic milk. It also covers the production technologies of various dairy products, quality control implementation, legislative regulations, and sanitation practices in dairy plants. The knowledge and skills gained in this course aim to equip students for their future academic and professional endeavours.

Course Outcomes:

- Understand the composition of milk, its formation, and the factors that influence its compounds.
- Demonstrate knowledge of healthy and hygienic milk, including its storage, transfer, and acceptance by enterprises.
- Analyze the chemistry of dairy products, including lipids, nitrogenous elements, carbohydrates, vitamins, mineral elements, and enzymes.
- Comprehend the microbiology of milk, infections related to dairy products, and the presence of foreign substances (e.g., antibiotics, pesticide residues) in milk.
- Evaluate pre-treatment technologies used in dairy enterprises, including clarification, bacto-fugation, homogenization, standardisation, and drinking milk technologies (pasteurized milk, UHT milk sterilization).
- Understand the importance of starter cultures in milk technology, methods for starter culture preparation, types of starter cultures, and issues related to degradation and bacteriophages.
- Gain knowledge of the technology behind various dairy products, such as yogurt, ayran, fermented drinks (kefir, kumiss), white cheese, regional cheese processing, and foreign cheese processing.
- Comprehend butter technology and methods for producing milk powders.
- Recognize the significance of sanitation in dairy enterprises and understand the cleaning and disinfection of tools and equipment.
- Apply the relevant laboratory techniques for analyzing milk and dairy products, including determining dry matter, ash content, protein, fat, salt, and acidity.