

Study Programme: Veterinary Medicine
Course Unit Title: Technology of milk and milk products
Course Unit Code: 3IVM11062
Name of Lecturer(s): Assistant Professor Marija Pajić
Type and Level of Studies: Undergraduate Academic Studies
Course Status (compulsory/elective): Compulsory (Module 1 - Food safety)
Semester (winter/summer): Winter
Language of instruction: English
Mode of course unit delivery (face-to-face/distance learning): Face-to-face
Number of ECTS Allocated: 2
Prerequisites: None
<p>Course Aims:</p> <p>The subject enables students to acquire: knowledge/understanding of basics of technological procedure in production of pasteurized and sterilized milk, milk drinks, fermented dairy products, cheese, processed cheese, butter, concentrated and dried dairy products, ice cream, products based on milk proteins and products based on lactose; skills - work in the dairy industry facilities; identification and analysis of the key points in the production process in the dairy industry.</p>
<p>Learning Outcomes:</p> <p>After completion of the course from this subject, student should be able to explain and understand the technological process of production of different types of milk and dairy products; to be able to carry out analyzes within the veterinary inspection in the production and trade of milk and dairy products, as well as to analyse and interpret the results; to identify and analyze the key points in the production process in the dairy industry; to point to the existence of specific problems and failures in control of the production, processing and transport of milk and dairy products, as well as participate in resolving and overcoming them.</p>
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Raw milk - Properties and selection (standardization). Technology of production of milk and dairy products and critical control points in the production of milk and dairy products (sterilized milk, milk powder, condensed milk, fermented milk (buttermilk, yogurt, fruit yogurt, kefir and other types of fermented milk), milk drinks, sour cream, butter, cream, cheese, ice cream and ice cream mixes, ice cream and cream powder). Microbial cultures in milk processing technology. Veterinary and sanitary control in the production and trade of milk and dairy products. Hazard analysis and critical control points (HACCP) in the production and processing of milk. Hygiene and sanitation in dairies.</p> <p><i>Practice</i></p> <p>Practical work in the dairy and cheese producers to control the process of production and processing of milk. Analysis of raw milk, supervision of thermal treatment, technological processes of production and processing of milk and dairy products, packaging, warehousing and storage of milk and dairy products</p>
<p>Required Reading:</p> <ol style="list-style-type: none"> 1. Stojanović, L., Katić Vera: Higijena mleka. Veterinarska komora Beograd, 2011. 2. Mansel W. Griffiths (ed.): Improving the safety and quality of milk, Volume 1: Milk production and processing, Woodhead Publishing Limited, 2010.

3. Mansel W. Griffiths (ed.): Improving the safety and quality of milk, Volume 2: Improving quality in milk products, Woodhead Publishing Limited, 2010.

4. Božanić Rajka, Jeličić Irena, Bilušić Tea: Analiza mlijeka i mliječnih proizvoda. Plejada d.o.o. Zagreb, 2012.

5. Mijačević Zora: Tehnologija mleka – fermentisana mleka i sirevi. FVM Beograd, 1992.

Weekly Contact Hours: 30

Lectures: 15

Practical work: 15

Teaching Methods:

Interactive lectures with the application of audio-visual aids;

Practical laboratory work, visits to dairies, analysis and interpretation of legislation related to the production and analysing of milk and dairy products, along with the keeping the diary of practical work

Knowledge Assessment (maximum of 100 points): 100

Pre-exam obligations	points	Final exam	points
Active class participation	30	practical exam	20
Test		oral exam	30
Preliminary exam(s)		
Diary of practical work	20		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.