

<b>Study Programme:</b> <i>ANIMAL SCIENCE</i>
<b>Course Unit Title:</b> Milk Processing equipment and Project engineering in dairy industry
<b>Course Unit Code:</b> 19ANM087
<b>Name of Lecturer(s):</b> PhD Ksenija Čobanović, Assistant professor
<b>Type and Level of Studies:</b> MASTER ACADEMIC STUDIES
<b>Course Status (compulsory/elective):</b> Elective
<b>Semester (winter/summer):</b> summer
<b>Language of instruction:</b> English
<b>Mode of course unit delivery (face-to-face/distance learning):</b> face-to-face
<b>Number of ECTS Allocated:</b> 6
<b>Prerequisites:</b> None
<b>Course Aims:</b> Master's students acquire basic knowledge about dairy equipment, liquids (water, hot water, steam, coolants), as well as the conditions that must be provided in facilities for the production of milk and dairy products.
<b>Learning Outcomes:</b> Master's students acquire skills for understanding and setting goals in dairy plant design, interpretation of legal bases for facility design, planning and preparation of techno-economic calculations, and technological design.
<b>Syllabus:</b> <i>Theory</i> Basic characteristics of technical and technological equipment in milk production and processing. Technical characteristics of important equipment. The use of legal regulations is important for design. Designing as a factor in the application of new standards. Defining the basic prerequisites for designing. Acquaintance with the conditions for designing facilities for the purchase of milk (collection stations), premises in the household, and facilities with a smaller volume of production. Washing of equipment (milking lines, milking parlor, lactofreeze, etc.). Human Resources. Infrastructure. Energy balances. Standards. Work environment. Environmental Protection. Safety at Work. <i>Practice</i> Determining dirty and clean roads. Determining dezo barriers. Measures to protect against contamination. Determination of technical conditions for control of critical points (milk cooling, washing temperature, washing time, etc.). Waste disposal. Protection against pests and rodents. Sanitation of premises where milk is stored.
<b>Required Reading:</b> 1. Правилник о ветеринарско-санитарним условима, односно општим и посебним условима за хигијену хране животињског порекла, као и о условима хигијене хране животињског порекла (Службени гласник РС бр. 25/2011. и 27/2014.) 2. Правилник о санитарно-хигијенским условима за објекте у којима се обавља производња и промет животних намирница и предмета опште употребе (Службени гласник РС, 6/97 и 52/97) 3. Правилник о квалитету производа од млека и стартер култура (Службени гласник РС 34/2010; Службени гласник РС 69/2010, 43/2013 - др. правилник и 34/2014) 4. Recommended International Code of Practice General Principles of Food Hygiene CAC/RCP 1-1969 Rev.4-2003

International standarda ISO 22000.

**Weekly Contact Hours:**

**Lectures: 2**

**Practical work: 2**

**Teaching Methods:**

Lectures, presentations, demonstrations, consultations, work in dairies and laboratories

**Knowledge Assessment (maximum of 100 points):**

<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	10	written exam	
Practical work	10	oral exam	60
Preliminary exam(s)		.....	
Seminar(s)	20		

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