

Study Programme: AGRONOMY
Course Unit Title: Microbiology and milk hygiene
Course Unit Code: 19.AGR113
Name of Lecturer(s): PhD Ksenija Čobanović, Assistant professor
Type and Level of Studies: PhD study
Course Status (compulsory/elective): Elective
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: 7
Prerequisites: None
<p>Course Aims:</p> <p>Acquiring scientific knowledge and introducing students to modern achievements in the field microbiology and milk hygiene and application of microorganisms in the production of dairy products.</p>
<p>Learning Outcomes:</p> <p>Training master students to all the necessary knowledge for scientific and professional work in the field of milk microbiology and the application of microorganisms in the production of dairy products.</p>
<p>Syllabus:</p> <p><i>Theory</i></p> <p>The role and importance of microorganisms. Ways of contamination, reproduction of microorganisms in raw milk. Factors that promote or prevent the reproduction and development of microorganisms in milk. Inactivation of microorganisms. Biochemical transformations of milk in the technology of fermented milk products and cheese. Means for cleaning and disinfection and mechanism of action on microorganisms. The importance of knowing good hygiene practices and critical control points in the production of dairy products.</p> <p><i>Practice</i></p> <p>Search, processing, analysis, and discussion of achievements in modern scientific and professional literature in the field of microbiology and hygiene of milk and milk products. Laboratory and field exercises.</p>
<p>Required Reading:</p> <ol style="list-style-type: none"> 1. Tamime, A. Y. (2006): Fermented Milks, Blackwell Publishing Company. 2. Stojiljković, J. (2010): Mikroflora sira, Zadužbina Andrejević, Beograd. 3. Richard K. Robinson (2005): Dairy Microbiology Handbook: The Microbiology of Milk and Milk Products, Third Edition. John Wiley and Sons, Inc., New York. 4. Fox, P. F., Mc Sweeney, P. L. H., Cogan, T. M., Guinee, T. P. (2004): Cheese, Chemistry, Physics and microbiology-General aspects, third edition, vol 1. 5. Marriott, N.G., Gravani, R.B. (2006): Principles of food sanitation, 5th ed. Springer Science + Business Media, Inc., USA.

Weekly Contact Hours:	Lectures: 4	Practical work: 4	
Teaching Methods:			
Lectures followed by appropriate literature and presentations. Research study. Consultation. Practical exercises in the laboratory and development scientific work.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation		written exam	
Practical work	20	oral exam	50
Preliminary exam(s)		
Seminar(s)	30		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			