

Course Unit Descriptor

Study Programme: Agronomy			
Course Unit Title: Molecular Genetics			
Course Unit Code: 3DAI3099			
Name of Lecturer(s): Trivunović J. Snežana, Full Professor			
Type and Level of Studies: Doctoral Academic Studies			
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: 10			
Prerequisites: None			
Course Aims: Mastering the principles of heredity in the functioning of DNA and RNA at the molecular level. To interpret the and explain the importance of chromosome and gene regulation, development path nucleus and cells organelles, and protein synthesis as well as mastering the technology of DNA, and reproductive and molecular technologies in animal husbandry.			
Learning Outcomes: After completing this course the student acquires the knowledge of the fundamental mechanisms heredity traits on the molecular level and, as the technology of DNA and RNA as well as knowledge of the molecular and reproductive technologies in animal husbandry.			
Syllabus: <i>Theory</i> DNA, RNA, proteins and mitochondrial. Chromosomes and gene regulation. Outside chromosomes heredity. The development path of the nucleus and cell organelles. DNA technology. Biotechnology in Animal Husbandry. <i>Practice</i> DNA, RNA, proteins and mitochondrial. Chromosomes and gene regulation. Outside chromosomes heredity. The development path of the nucleus and cell organelles. DNA technology. Biotechnology in Animal Husbandry.			
Required Reading: 1. Vidović V., Stupar M. (2010): Molekulska genetika. 2. Benjamin, A. Pierce (2008): Genetics – A Conceptual Approach. 3. Lewin B. (2000): Genes VII 4. Gellderman, H. (2005): Gene Mapping and Sequences of Animal Genom.			
Weekly Contact Hours:	Lectures: 4	Practical work: 6	
Teaching Methods: The theoretical part of study is done with the use of films and presentations that have been prepared so that students have visual representation the teaching units. Practical work is carried out at the Laboratory of Molecular Genetics and the use of computers and software in the field of genetics and biotechnology in livestock production.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class	10	written exam	

participation			
Practical work		oral exam	50
Preliminary exam(s)	20	
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.