

Course title : Microbiology				
Course code	Subject Status	Semester	ECTS credits	Number of hours
	Obligatory	II	5	3P + 1L

Study program is organized: at undergraduate academic study programme Plant Production		
Prerequisites other subjects (recommendation): There are no requirements for reporting and lecture of this course		
Course aims: introduction of students to morphology, physiology, ecology, systematics of microorganisms and microorganisms in environment.		
The name of teacher and assistant: asis.prof Igor Pajović		
Method of Teaching: Lectures, seminars, consultations, colloquiums and final exam.		
WORK PLAN:		
Week and date		
Preliminary weeks		Preparation and semester enrollment
I Week	Lecture	Subject, significance and historical development of microbiology
	Exercises	Microbiological laboratory, types of laboratories and required space
II Week	Lecture	Morphology of microorganisms
	Exercises	Description of job place and jobs in the microbiological laboratory
III Week	Lecture	Ecology of microorganisms
	Exercises	Instructions for work in the microbiological laboratory
IV Week	Lecture	Metabolism of microorganisms
	Exercises	Microbiological utensils and equipment for microbiological laboratory
V Week	Lecture	Growth, reproduction and movement of microorganisms
	Exercises	Laboratory apparatus
VI Week	Lecture	Colloquium I
	Exercises	Test 1
VII Week	Lecture	Corrective Colloquium I
	Exercises	Corrective Test 1
VIII Week	Lecture	Microorganisms with special characteristics (Energy groups of microorganisms)
	Exercises	Sterilization and Pasteurization
IX Week	Lecture.	Pathogenicity of microorganisms
	Exercises	Nutritious substrates
X Week	Lecture	The role and distribution of microorganisms in nature
	Exercises	Cultivation of microorganisms on nutrient media
XI Week	Lecture	Genetics of microorganisms (variability of microorganisms)
	Exercises	Microscope
XII Week	Lecture	Basic characteristics of systematic groups of microorganisms
	Exercises	Microscopy technique and making microbiological preparations
XIII Week	Lecture	Colloquium II
	Exercises	Test 2
XIV Week	Lecture	Corrective Colloquium II
	Exercises	Corrective Test 2
XV	Lecture	Final Exam
	Exercises	
XVI		Semester verification
XVII-		Additional classes
XVIII-XXI-		Corrective Final Examination

Consultations: 2 hours during the week	
Load students in hours:	
<i>A week</i>	<i>During the semester:</i>
<p>5 x 40/30 = 6 hours 40 min.</p> <p>Structure:</p> <ul style="list-style-type: none"> 2 hours lectures 2 hours exercises and laboratory 2 hours and 40 minutes individual work of student (preparation for exercises, seminar work) including consultation 	<p>Teaching and the final exam: 6 h 40 min x 16 = 106 h 40 min.</p> <p>Necessary preparation (before semester administration, enrollment and verification): 2 x 6 h 40 min = 13 h 20 min</p> <p>Total hours for the course: 5 x 30 = 150 hours</p> <p>Additional work to prepare the corrective final exam, including the exam taking 0 – 30 hours</p> <p>Structure: 106 h 40 min (teaching) + 13 h 20 min (preparation) + 30 h (additional work)</p>
<p>State of student during course: Students are required to attend lectures and exercises, seminar work, both tests and final exam.</p>	
<p>Recommended literature:</p> <ol style="list-style-type: none"> 1. Mirjana Jarak, Govedarica Mitar (2000): Mikrobiologija. Poljoprivredni fakultet Novi Sad. 2. Mirjana Bojanić Rašović (2020): Mikrobiologija za studente animalne proizvodnje, Univerzite Crne Gore. <p>Additional literature:</p> <ol style="list-style-type: none"> 3. Mirjana Jarak, Simonida Đuric (2004): Praktikum iz Mikrobiologije. Poljoprivredni fakultet Novi Sad. 	
<p>Forms of assessment and evaluation:</p> <p>homeworks _____ 10 points</p> <p>two tests _____ 5 points each (in total 10 points)</p> <p>two colloquiums _____ 15 points each (in total 30 points)</p> <p>final exam _____ 50 points</p> <p>Passing grade is obtained if the cumulative accumulates at least 51 points.</p> <p>Learning outcomes:</p> <p>After completing lectures, exercises and the exam student will be able to recognize and know:</p> <ol style="list-style-type: none"> 1. microbiological scientific disciplines and their subdivisions 2. different types of microorganisms 3. morphological, physiological and ecological characteristics of microorganisms 4. the role and distribution of microorganisms in nature 5. the way of infection in plants and the ways of transmitting microorganisms by species 6. parts of the microbiological laboratory, the purpose of laboratory equipment and apparatus 7. microscopy techniques 	
<p>Teacher who provided the information: assistant professor Igor Pajović e-mail: pajovicb.igor@gmail.com; igorp@ucg.ac.me</p>	