

Course Unit Descriptor

Study Programme: Food engineering; Biotechnology; Pharmaceutical engineering; Chemical engineering; Material engineering			
Course Unit Title: Environmental microbiology			
Course Unit Code: DSZI15			
Name of Lecturer(s): Assoc. Prof. Dragoljub Cvetković, PhD; Ass. Prof. Aleksandra Ranitović, PhD			
Type and Level of Studies: Doctoral academic studies			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): -			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 10			
Prerequisites: No			
Course Aims: Acquiring the ability of scientific and academic skills in the field of environmental microbiology and more detailed understanding of the interaction of microorganisms with the specific environment.			
Learning Outcomes: Students are trained to understand theoretical and practical principles of environmental microbiology and qualified for independent scientific and technical in the field of environmental microbiology, as well as a detailed understanding of the physiological interaction between microorganisms and natural environment.			
Syllabus: Analysis of the general biological characteristics of different groups of microorganisms which natural niches or main transferred vector are air, as well as those microorganisms in natural and industrial conditions occur in the form of biofilm. Analysis of specific biological properties of certain cultures, as well as characteristics that are of particular importance for their survival in different environments. Searching scientific literature, processing, analysis and discussion of the latest findings in the field of environmental microbiology.			
Required Reading: <ol style="list-style-type: none"> 1. van Elsas J.D., Janson K., Trevors J.T.: Modern Soil Microbiology, CRC Press, 2007. 2. Kranner I., Beckett R.P., Varma A.K.: Protocols in Lichenology, Springer, 2000. 3. Schmidt T.M., Schaechter T. (2012): Topics in Ecological and Environmental Microbiology, Academic Press, Oxford 4. Ivanov V. (2016): Environmental Microbiology for Engineers;CRC Press, USA. 			
Weekly Contact Hours: 6	Lectures: 4	Practical work: 2	
Teaching Methods: Lectures and students group work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	-
Practical work	-	oral exam	30

Preliminary exam(s)	-	
Seminar(s)	60		

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