



COURSE DATASHEET

Semester:	2015/16/2
Course:	Fundamental microbiology
Code:	VEMKLIB112M
Responsible department:	Department of Limnology
Department code:	MKLI
Responsible instructor:	dr. Csilla Stenger-Kovács

Course objectives:

Students will learn the importance of the microorganisms in the environment, the basics of their biology, moreover, the possibilities of their applications in the field of applied microbial biotechnology.

Course content:

Microbiology – history, conception and domain. Microorganisms in the environment.
General characteristics of the microorganisms. - Virology
General characteristics of the microorganisms. - Bacteriology
Bacteriology – the physiology of bacteria. Other procaryotes.
General characteristics of the microorganisms. - Mycology.
The ecology of microorganisms – abiotic and biotic factors.
Microbiology of the transformation and cycle of nitrogen in the environment.
Microbiology of the transformation and cycle of carbon and other elements in the environment.
Introduction to microbial biotechnology – fermentation technology, soil inoculation, bioremediation.
Introduction to microbial biotechnology – biogas production, biological plant protection, pesticide breakdown.
The role of microorganisms in the katabolism of oil products.
The biological factors influencing the quality of oil products.
Microbial corrosion processes and protection methods.

Requirements, evaluation and grading:

The half-hour oral examination is about 20-25 minutes after preparing the student with the exam questions / themes to express. Insufficient (1) the answer is, if the candidate has either a short outline of the topic or the topic is not able to provide definitions of basic concepts. Satisfactory (2) the answer is, if the candidate can interpret basic concepts of the issue. Fair (3) the answer is, if the candidate is aware of the basic concepts of issues and is able to help teachers present the topic in a logical context. Good (4) the answer is, if the candidate's response to a logical structure alone explains the item (exam) all relevant facts and relationships, but the compulsory literature associated with item no or incomplete knowledge. Excellent (5) the answer, if the candidate has all the items, as well as the required knowledge of literature, logically structured, independent, detail is excellent, fully exploring the relationships within bears witness to answer.

Required and recommended readings:



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Required and recommended readings:

Helmeczi B.: Mezőgazdasági mikrobiológia. Mezőgazda Kiadó, 1994.
Pesti M. (szerk.): Általános mikrobiológia. Dialóg Campus Kiadó, 2001.
Szabó I. M.: A bioszféra mikrobiológiája I – IV. Akadémiai Kiadó, 1997-2005.