UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2016/17/1
Course:	Fundamental microbiology – laboratory practice
Code:	VEMKLIB232M
Responsible department:	Department of Limnology
Department code:	MKLI
Responsible instructor:	Eszter Horváth

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:

1 Working in the microbiology lab, typical equipments, tools. Lab safety 2 Microbiological sampling - soil 3 Microbiological sampling - water 4 Microbiological sampling – plants (roots, tubers, leaves, etc) 5 Microscopy, investigation of native specimens 6 Microscopic cell counting 7 Investigation of stained specimens – yogurt culture 8 Investigation of stained specimens – milk, total cell count 9 Rhizobium strains 10 Vital staining techniques 11 Gram staining 12 Fluorescent detecting techniques 13 Flow cytometry, PCR 14 The basics of culturing techniques 15 Inoculation, clean cultures, dilution gradients, agar plate preparation

Requirements, evaluation and grading:

Presentation of lab notes + the result of 2 written examinations (

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.