



COURSE DATASHEET

Semester:	2016/17/1
Course:	Up-to-date biotechnology processes
Code:	VEMKBMM446K
Responsible department:	Research Institute on Bioengineering, Membrane Technology and Energetics
Department code:	MKBME
Responsible instructor:	dr. Katalin Bélafiné Bakó

Course objectives:

To introduce students into the up-to-date bioengineering processes, to describe their characterization.

Course content:

- 1-2. Introduction - the fundamentals of biotechnology and bioengineering, enzymes and microbes
- 3-4. Enzyme kinetics - complex systems
5. Ribozymes
- 6-7. Novel processes in sterile microbial technologies
- 8-9. New trends in bioreactor development
10. Extremophiles and their applications
- 11-12. Novel processes in downstream
13. Controlling techniques in the 21st century
14. Consultation, exam

Requirements, evaluation and grading:

Written and / or oral exam in the end of the course.

After a half an hour's preparation the examinee gives an oral presentation on the topic for about 20-25 minutes.

Fail (1) when the examinee is unable to prove either the definition of the basic notions or the short scheme of things connected with the topic.

Pass (2) when the examinee is able to interpret the basic notions of the topic.

Satisfactory (3) when the examinee is well - versed in the basic notions of the topic and is able to present their



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Requirements, evaluation and grading:

logic connections - with the help of the examiner.

Good (4) when the examinee provides a logic, well - structured presentation with all the important facts and connections but he does not know or partly knows the required reading material connected with the topic.

Very good (5) when the examinee gives a logic, excellent, well-structured, perfect in details oral presentation that completely reveals the connection of the concepts within the topic.

Required and recommended readings:

Buchholz, K., Kasche, V., Bornscheuer, U.T.: Biocatalysts and enzyme technology, Wiley, Weinheim, 2005

Industrial enzymology, Ed. By Godfrey, T., West, T., MacMillan Press, London, 1996