



## COURSE DATASHEET

<b>Semester:</b>	2014/15/1
<b>Course:</b>	Up-to-date biotechnology processes
<b>Code:</b>	VEMKBMM446K
<b>Responsible department:</b>	Research Institute on Bioengineering, Membrane Technology and Energetics
<b>Department code:</b>	MKBME
<b>Responsible instructor:</b>	dr. Katalin Bélafiné Bakó

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### 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.

### 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