UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2016/17/1
Course:	Integrated biotechniques
Code:	VEMKBMB412B
Responsible department:	Research Institute on Bioengineering, Membrane Technology and Energetics
Department code:	MKBME
Responsible instructor:	dr. Katalin Bélafiné Bakó

Course objectives:

To introduce the features of integrated systems in biotechnological processes for the students, moreover to present the possibilities and difficulties of their designing, building and operation.

Course content:

1-2. The reasons and aims of integration (e.g. product inhibition), possible connecting points
3-4. Demands of the process to integrate into the system
5-7. Systems consisting of more unit operations
8-9. Application possibilities of membrane processes
10. Integrated system in one unit, requiring membrane separation process:
membrane electrodes
membrane reactors
11-13. Application of in-line and in-situ integration for product recovery, Case studies _

Requirements, evaluation and grading:

The students must give a presentation which needs to be supported by a written report.

Required and recommended readings:

Integration of membrane processes into bioconversions, Ed. by Bélafi-Bakó, K., Gubicza, L., and Mulder, M., Kluwer, New York, 2000