



## COURSE DATASHEET

<b>Semester:</b>	2012/13/1
<b>Course:</b>	Integrated biotechniques laboratory practice
<b>Code:</b>	VEMKBMB432B
<b>Responsible department:</b>	Research Institute on Bioengineering, Membrane Technology and Energetics
<b>Department code:</b>	MKBME
<b>Responsible instructor:</b>	dr. Béla Nándor Nemestóthy

---

### Course objectives:

The aim of the measurements is to study integrated processes like ED and pervaporation with bio system. Students are work individually or groups of 3-4.

### Course content:

1. Integration of a complex system: case study.
2. Electrodialysis, selective acid removal from a bio reaction.
3. Pervaporation aided enzyme reactor, design and optimisation.
4. Integration of previous systems to a industrial method (SUPREPRO).

### Requirements, evaluation and grading:

The accomplishment of the all measurements. Preparing a related report and a preceding test.

### Required and recommended readings:

Ladisch, Michael R Bioseparations Engineering: Principles, Practice, and Economics. Wiley. 2001

Pécs Miklós: A biológiai iparok elválasztási műveletei BME 2010

Martin Chaplin and Christopher Bucke: Enzyme Technology, Cambridge University Press, 1990