



## SUBJECT DATASHEET

<b>Semester:</b>	2010/11/2
<b>Subject:</b>	Membrane processes
<b>Code:</b>	VEMKBMT344M
<b>Responsible department:</b>	Research Institute on Bioengineering, Membrane Technology and Energetics
<b>Responsible department code:</b>	MKBM
<b>Responsible lecturer:</b>	dr. Katalin Bélafiné Bakó

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### Educational objectives:

To introduce the students into the fundamentals of membrane separation, the operation of various membrane separation techniques and their applications.

### Detailed content of the subject:

1. Introduction, classification, driving forces
2. Pressure driven membrane processes
3. Ultrafiltration
4. Microfiltration, nanofiltration, reversed osmosis
5. gas separation
6. Pervaporation
7. Dialysis, haemodialysis
8. Electrodialysis
9. Liquid membranes
10. Integrated systems
11. integration in chemical processes
12. Integration in bioconversions
13. Case studies

### Requirements:

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

### Required and suggested references: