



COURSE DATASHEET

Semester:	2014/15/1
Course:	Membrane separation processes
Code:	VEMKBMB412M
Responsible department:	Research Institute on Bioengineering, Membrane Technology and Energetics
Department code:	MKBME
Responsible instructor:	dr. Katalin Bélafiné Bakó

Course objectives:

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

Course content:

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, evaluation and grading:

Terms of signature:

Participation on the lectures.

Required and recommended readings:

Scott, K.: Handbook of Industrial Membranes, Elsevier, 1995.

Staupe, E.: Membranen und Membranprozesse, Grundlagen und Anwendungen, VCH Verlagsgesellschaft mbH, Weinheim, 1992.

Bélafiné Bakó Katalin: Membrános műveletek, Veszprémi Egyetemi Kiadó 2002.