



# UNIVERSITY OF PANNONIA

## COURSE DATASHEET

<b>Semester:</b>	2015/16/2
<b>Course:</b>	Down-stream processing
<b>Code:</b>	VEMKBMB312F
<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

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### Course objectives:

Study of the main downstream processes in fermentation technologies.

### Course content:

1. Separation techniques in downstream processes
2. Recovery of cells, precipitation
3. Product concentration processes in fermentation technologies
4. Product cleaning processes in fermentation technologies

### Requirements, evaluation and grading:

The lectures' materials.

### Required and recommended readings:

Vogel, H.C., Todaro, C.L.: Fermentation and biochemical engineering handbook. William Andrew Publishing, 1997. Prasad, N.K.: Downstream process technology: A new horizon in biotechnology. PHI Learning, 2010.