



## COURSE DATASHEET

<b>Semester:</b>	2013/14/1
<b>Course:</b>	Process Engineering Tools in the Petroleum Industry
<b>Code:</b>	VEMKFOM153A
<b>Responsible department:</b>	Department of Process Engineering
<b>Department code:</b>	MKFO
<b>Responsible instructor:</b>	dr. Lajos Nagy

---

### Course objectives:

Introduction to process engineering problems and tools

### Course content:

Introduction to process engineering problems, Information sources, models and tools of process engineering, Classification of process engineering tools, Models and using of models for problem solving, Tools for solving process engineering problems, Using Matlab for solving process engineering problems (reaction kinetics), Using Matlab for solving process engineering problems (reaction kinetics), Operation of dynamics simulators, Unisim simulator, Case study (distillation), Case study (heat exchanger), Case study (reactor), OTS systems

### Requirements, evaluation and grading:

Required and suggested references: AspenPlus Users Guide. Matlab and Simulink Users Guide. Bequette, B. W.: Process Dynamics: Modeling, Analysis, and Simulation, Prentice Hall, London  
Requirements: Completing two midterm examinations. Possibilities for repeating the subject: Repeated examination on the course content. Accepted equivalent subjects: Learning efforts necessary to satisfy the requirements of the subject: Learning of the course material.

### Required and recommended readings:

HYSYS Felhasználói Kézikönyv., Matlab and Simulink Felhasználói Kézikönyv., Bequette, B. W.: Process Dynamics: Modeling, Analysis, and Simulation, Prentice Hall, London, Brian Roffel, Ben Betlen: Process Dynamics and Control, Wiley, Donald R. Coughanowr: Process Systems Analysis and Control, McGraw-Hill