



SUBJECT DATASHEET

Semester:	2009/10/2
Subject:	Chemical Process Control (practice)
Code:	VEMKFO3233A
Responsible department:	Department of Process Engineering
Responsible department code:	MKFO
Responsible lecturer:	dr. Lajos Nagy

Educational objectives:

To practice solving of algorithm level problems with synthesis of chemical and control engineering principles.

Detailed content of the subject:

Using of Matlab/Simulink Black box models State-space models Identification Design of feed-forward controllers Design of continuous PID controllers - || - Design of digital controllers - || - Direct synthesis method. Internal Model Control (IMC). Neural network and fuzzy logic controllers Model Predictive Control Multivariable Control Techniques Control in the coordinated level. Plant wide control

Requirements:

Required and suggested references: Szeifert F., Chován T., Nagy L.: Szabályozóalgoritmusok - Szabályozástervezés VE jegyzet, VE 4/95., Veszprém, 1995. Seborg, D.E., Edgar, T.F., Mellichamp, D.A.: Process Dynamics and Control, John Wiley. New York (1989). Requirements: Completing 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 suggested references:

Szeifert F., Chován T., Nagy L.: Szabályozóalgoritmusok - szabályozó tervezés VE jegyzet, VE 4/95, Veszprém, 1995. Seborg, D.E., Edgar, T.F. Mellichamp, D.A.: Process Dynamics and Control, John Wiley. New York (1989). Chipperfield, A.J., Fleming, P.J. (ed.): MATLABR toolboxes and applications for control. IEE Control Engineering Series 48., 1993.)