



## COURSE DATASHEET

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| <b>Semester:</b>               | 2015/16/1  |
| <b>Course:</b>                 | Process Dynamics and Control Laboratory practice |
| <b>Code:</b>                   | VEMKFOB232I                                      |
| <b>Responsible department:</b> | Department of Process Engineering                |
| <b>Department code:</b>        | MKFO   |
| <b>Responsible instructor:</b> | dr. Lajos Nagy                                   |

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### Course objectives:

To practice solving of algorithm level problems of control engineering principles.

### Course content:

Introduction: Systems and processes. Input output models. First order, 2-nd order systems, integrators, systems with dead time. Identification of process models. Design of feedback control algorithms: PID controllers, tuning methods. Direct synthesis method. Internal model control.

### Requirements, evaluation and grading:

Grading is based on two midterm examinations. Each examination consists of 4 problems to be solved. The final mark is determined according to following table based on the weighted average of the points obtained for the midterm examinations. The weights of 1th and 2nd midterm exams and home work are=0.3, 0.7, final mark above 80 excellent (5) 70-80 good (4) 60-70 medium (3) 50-60 pass (2) below 50 fail (1)

### Required and recommended readings:

Szeifert F., Chován T., Nagy L., Almásy G.: Rendszermodellek-rendszeranalízis. VE jegyzet, VE-48/94, Veszprém, 1994. Szeifert F., Chován T., Nagy L.: Szabályozóalgoritmusok - szabályozó tervezés VE jegyzet, VE 4/95, Veszprém, 1995.