



COURSE DATASHEET

Semester:	2014/15/1
Course:	Mechatrical Applications of Microcontrollers
Code:	VEMKFIB533M
Responsible department:	Institute of Physics and Mechatronics
Department code:	MKFI
Responsible instructor:	dr. Zoltán Gugolya

Course objectives:

Gaining skills at mechatronical applications of microcontrollers, programmed use of sensors and actuators - based on course Microcontrollers (VEMKFIB255V).

Course content:

Controlling stepper motors, using end position sensors.
A/D signal conversion with the microcontroller.
Pulse width modulation.
Temperature control.
Illuminance control.
Elementary infra communication between two microcontrollers.
Signal processing of additional basic sensors.
Operation of some basic actuators.
The C programming language and the C developing environment for the microcontroller.
Variables, cycles, ports, interrupts, conditions, branching.

Requirements, evaluation and grading:

Compiling a test program at the last laboratory training.

The following solution is also valid: the student presents his or her own development that has to be modified on site, based on the lecturer's demands.

Required and recommended readings: