UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2012/13/1
Course:	Computer Science for Engineers I.
Code:	VEMKFOB333S
Responsible department:	Department of Process Engineering
Department code:	MKFO
Responsible instructor:	Zsolt Ulbert

Course objectives:

Introduction to computer science need for the engineering and research work; to improve the problem solving skill using programming and algorithm development exercises; to give the basic knowledge which can be used in developing simple programs useful in engineering work.

Course content:

Windows operation system, networks, Moodle E-learnging E-mail and other applications in the engineering work Webpage construction WEB applications in the engineering work MS Excel programming: macros MS Excel programming: Visual Basic for Application (VBA) Exercises and examination I. Basics of programming (MATLAB/Scilab): data types, operations, simple algorithms, iterations Basics of programming (MATLAB/Scilab): I/O functions (input, save, and plot data, file operations) Linear equation systems Root finding – optimization Least squares method Numerical integration Differential equation systems Examination II.

Requirements, evaluation and grading:

The attendance of the lectures and the solution of the midterm exercises are obligatory. The whole content of the lectures is covered in the examinations. Grading is based on the two written examinations. The final mark is determined according to following table based on the weighted average of the points obtained in the midterm (40%) and final examinations (60%): % final mark above 80 excellent (5) 70-79 good (4) 60-69 medium (3) 50-59 pass (2) below 50 fail (1)

Required and recommended readings:

Kötelező: Cleve Moler:Numerical Computing with MATLAB Ajánlott: GISBERT, Stoyan MATLAB, BORSE,Garold J. Numerical methods with MATLAB, BIRAN,Adrian MATLAB for engineers, OGATA,Katsuhiko Solving control engineering problems with MATLAB