

COURSE TITLE: MATLAB PROGRAMMING
Institute/Division: Chair of Technical Informatics / Faculty of Electrical and Computer Engineering
Course code: E5mlab
Erasmus subject code: 11.3
Number of contact hours: 45
Course duration: 1 semester
ECTS credits: 6

Course description: Introduction to MATLAB development environment, developing scripts and functions. Matrix, table and other data types. Solving algebraic and differential equations, using Symbolic Math Toolbox. Object oriented programming, handle graphics and graphics processing. Parallel computing and other programming tips. Modeling, simulation and control with MATLAB, Simulink, Stateflow and Control System Toolbox. Embedded MATLAB

Matlab Laboratory is prepared by M.Sc D.Grela.
Laboratory concerns on practical approach to the topics covered during the lectures. During the course scripts and functions solving problems of varying complexity are created. Such functions solve simple math problems using matrices, tables and other data types. The issues of computer graphics and image processing are also discussed.

Course type: lectures (20h), laboratory (20h), project (5h)

Literature:

1. Tobin A. Driscoll, Learning MATLAB, SIAM 2009
2. MATLAB homepage resources: www.mathworks.com
3. B. Mrozek, Z. Mrozek, MATLAB i Simulink, Poradnik użytkownika (MATLAB and Simulink, 3e: User's Guide – in Polish, for reference only)

Prerequisites: any programming language

Assessment method: Laboratory exercises and project.

Lecturers: dr Zbigniew MROZEK PhD,

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Remarks MATLAB, Simulink, Control System Toolbox and Symbolic Math Toolbox are available in computer laboratory. Other MATLAB extensions will be used during