APPLICATIONS OF MATLAB IN COMPUTER MODELING

Syllabus

Instructors: M.Oleksy, W.Cecot

Course objectives:

The objective of the course is to provide students with a knowledge of certain, useful for engineers, applications of MATLAB environment to numerical modeling. The course is focused on: symbolic operations, including linear algebra, algebraic and differential equations, integration; graphics and visualization in 2D and 3D; a plane stress and a plane strain problems; PDE toolbox; dynamic analysis of selected structures; basis of statistics; animation possibilities

Text Books:

➢ B. R. Hunt, R. L. Lipsman, J. M. Rosenberg: *A Guide to MATLAB: For Beginners and Experienced Users*, Cambridge University Press, 2001.

➢ Quarteroni, F. Saleri: *Scientific Computing with MATLAB and Octave*, Springer, 2006.

Assessment method:

Laboratory assignments and own presentation