POLITECHNIKA KRAKOWSKA im. Tadeusza Kościuszki
Wydział Inżynierii Lądowej
Instytut Technologii Informatycznych w Inżynierii Lądowej (L-5)

Computational Methods | group gK02 | summer 2017/2018

REQUIREMENTS FOR ASSIGNMENT REPORTS

Reports for all Assignments should be neat and prepared by hand. Please, be aware that when you deliver your project I will check the results in programmes which were used for solution, so please bring proper files (on pendrive or on your own laptop) and be able to show me your computations.

Report for Assignment 1 (beam) should contain:

1. Presentation of the task: what is given, what is unknown. Assume 'real' parameters.
2. Discretization of the analysed specimen (numbering of elements, nodes, degrees of freedom, table of topology)
3. Mathematical model (approximation)
4. Outline of FEM algorithm (do not include Matlab code)
5. Results from Matlab: vectors of nodal degrees of freedom and of reactions
6. Verification of global equilibrium. Comment it.
7. Sketch of beam deflection using results from Matlab
8. Diagram of cross-sectional forces (shearing force and bending moment) using results from Matlab (return to elements)
9. Comparison of results from Matlab and another FEM program (Statyka, RM-Win or Robot). Comment the results.
10. Calculation of deflection and rotation at chosen point inside selected (but not the first) element.