Numerical Methods (ENUME)
Project Requirements 2019

Each student is obliged to complete three individual assignments using MATLAB software:
A. Numerical methods for solving systems of linear algebraic equations;
B. Numerical methods for approximation of functions;
C. Numerical methods for solving ordinary differential equations.

Each assignment consists of implementation and systematic testing of numerical algorithms (NAs). The student's work related to each assignment should include:
- the analysis of the recommended sources of information (papers, books, internet sites, *etc.*) about NAs;
- the implementation of NAs in MATLAB;
- the systematic testing of NAs;
- the preparation of the final report.

The final report should contain:
- the title page (the name of the author, the number and the title of the assignment, the name of the course, the name of the advisor, the place and the date),
- the table of contents,
- theoretical introduction with regard to the implemented and used NAs,
- the concise description of NAs,
- the methodology for testing NAs,
- the results of testing NAs,
- the discussion of the results of testing (evaluation of the correctness, accuracy, effectiveness, *etc.*),
- the overall conclusions concerning the properties of NAs and its implementation,
- the list of references.

The final report should be edited using a text processor with the embedded equation editor:
- the same font and size of alphanumerical characters should be used throughout the whole document;
- all the mathematical symbols should be of the same size and should be edited using the equation editor;
- all the figures should be numbered and provided with informative captions;
- all the figures should be referred to in the text;
- all the references should be called to in the text.

The listing of the corresponding MATLAB programs, well structured and commented, should be appended to the report (smaller font size and text layout in two columns). The report should be printed on both sides.