ABSTRACT

for coursework, student Pyatnytskyi Dmitriy, group XA-51
on discipline "Numerical methods"
on the topic of *"Solving systems of linear algebraic equations n-th order by Gauss method with a choice of main element*"

In the course work the numerical method for the system of linear algebraic equations solution has been investigated and the problems of the experimental data approximation have been solved.

In the first section of the course work the Gauss method with the choice of the main element for solving the system of linear algebraic equations of the nth order has been studied; the software product for the implementation of this method was created in the Visual Studio 2015 environment (C ++, Win32 Console Application). Test tasks on this topic are solved.

The second section of the course paper contains a solution to the tasks of approximation of the function: finding the coefficients of the empirical dependence of the given form, finding the general form and coefficients of approximating dependence and spline interpolation. The solution to these tasks is performed in the MS Excel environment.