
UNIVERSITY OF ENERGY AND NATURAL RESOURCES
DEPARTMENT OF MATHEMATICS & STATISTICS
MATH 305: NUMERICAL ANALYSIS AND COMPUTATION
LEVEL 300 EEE.

First Semester 2023/2024
ASSIGNMENT SET 1

Answer all questions

Hand in time: **Before 12noon, 15/02/2024**

1. a) Solve **Question 1(L) of Problem Set 3** by hand using the Gaussian elimination method with or without partial pivoting.
b) Solve the question in a) using the matlab code for Gaussian elimination.
2. Solve **Question 5(b) of Problem Set 3** by hand using;
 - a) Doolittle's decomposition method
 - b) Crout's decomposition method
 - c) Cholesky's decomposition method
3. Solve **Question 5(b) of Problem Set 3** using the matlab codes for;
 - a) Doolittle's decomposition method
 - b) Cholesky's decomposition method
4. a) Modify the matlab code for the Doolittle's decomposition method into a code for Crout's decomposition method
b) Use the modified code in a) to solve **Question 5(b) of Problem Set 3**

NOTE: Refer to questions from pages 86-87 and codes from 51,56-57,74-76 of the handout .