### ASSIGNMENT 02 (Chapter 1) Linear Algebra

### Subject: MAE101

### Name of student:

1. Solve the exercises yourself and submit your solutions in LMS before deadlines (do not send via email).

2. Each student is required to represent solutions of at least 2 of the exercises in lecture classes.

Chapter 1:

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|  | **Content** | **Solution** |
| 1 | Write down the general form of a system of linear equations (SLE).  1.1.What is/are:   1. A solution of SLE ? 2. Equivalent systems ? 3. Consistent and inconsistent SLE ?   1.2. Write down the coefficient and augmented matrices |  |
| 2 | 1. Write down three elementary operations on SLE and on matrices. 2. Give an example of a SLE and solve it by using elementary operations |  |
| 3 | 1. What is echelon form, reduced echelon form. Give 3 matrices corresponding to (1) non echenlon form; (2) echelon but not reduced; reduced echelon form; 2. What is Gauss Elimination ? |  |
| 4 | What is the rank of a matrix ? Give an matrix of size 3x4 which has rank 2. |  |
| 5 | What is homogenous equations ? Give an example of homogenous equations and the set of solution. |  |
| 6 | What is a linear combination of vectors ? of solutions ? |  |
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