

Course Syllabus

LINEAR ALGEBRA

Printed by: jfmoncay

Program: Telecommunications Engineering

1. Course number and name

MATG1003 - LINEAR ALGEBRA

2. Credits and contact hours

2 credits and 4 contact hours

3. Instructor's course or coordinator's name

MIREYA RAFAELA BRACAMONTE PEÑA

4. Text book, title, author, and year

- Stanley Grossman. Álgebra Lineal (Séptima)
 - a. Other supplemental materials
- Bernard Kolman. Álgebra Lineal (Octava)
- Jesús Rojo. Álgebra Lineal (Segunda)
- Ron Larson. Fundamentos de Álgebra Lineal (Séptima)

5. Specific course information

- a. Brief description of the content of the course (catalog description)

This course is basic training for engineering careers, natural and exact sciences, which deals with the study of matrices, determinants, systems of equations, vector spaces, linear transformations, spaces with Internal product, eigenvalues and eigenvectors; contributing to the development of the abstract thinking of the professional future.

- b. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction

- 1.- Solve problems that require mathematical models by using linear equation systems.
- 2.- Use the concepts and properties of matrices, vector spaces, spaces with internal product, linear transformations, eigenvalues and eigenvectors, for the resolution of science and engineering problems.
- 3.- To identify hypothesis and conclusion of logical statements of linear algebra, for the analysis and argumentation of its validity.

- b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

- An ability to apply knowledge of mathematics, science, and engineering
- A recognition of the need for, and an ability to engage in life-long learning

7. Brief list of topics to be covered

- 1.- Linear equation systems
- 2.- Vector spaces and subspaces



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- 3.- Linear transformations
- 4.- Spaces with internal product
- 5.- Eigenvalues and eigenvectors