

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
ECON209	Linear Algebra	3	3	0	0	3	3
Prerequisites							
Admission Requirements							
Language of Instruction							
French							
Course Type							
Compulsory							
Course Level							
Bachelor Degree							
Objective							
The aim of this course is explaining essentials about linear vector spaces and matrix operations, and constructing a mathematical basement for linear algebra in economy.							
Content							
Vectors and matrix operations, linear independence of vectors and linear vector spaces, vector subspaces, dimension, basis vectors, linear transformations, determinant, application to economy, analysis of eigenvalue-eigenvectors, diagonalization.							
References							
Introduction à l'algèbre linéaire, Özgür Gün, Sophie Jallais							

Theory Topics

Week	Weekly Contents
1	System of Linear Equations
2	Solving System of Linear Equations
3	Solving System of Linear Equations with Gauss method
4	Vector spaces
5	Subspaces, Linear Independence
6	Basis, Dimensions
7	Linear Transformations
8	Midterm
9	Matrices
10	Determinant
11	Inverse of a matrix with Gauss method
12	Rank, Image, Kernel
13	Eigenvalues and Eigenvectors
14	Application to economy