Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
ECON209	Linear Algebra	3	3	3	0	3	5

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The aim of this cours 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 independance 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 Independance
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