Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MAT162	Differential and Integral Calculus	2	3	2	0	5	8

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	Teaching the fundaments of linear algebra
Content	Real numbers, Complex numbers, Vector spaces, Finite dimensional vector spaces, Basis, Dimension, Direct sum, Linear transformations, Matrices, Change of basis, Row and column spaces
References	Axler, Sheldon J, Linear Algebra Done Right.

Theory Topics

Week	Weekly Contents
1	Fields
2	Vector spaces-Subspaces
3	Basis-Dimension
4	Direct sum
5	Linear transformations-Image-Kernel
6	Matrix of Linear transformations-Matrices
7	Exam-Change of Basis
8	Inversibles matrices-Elementary matrices
9	System of Linear Equations
10	Subspaces of row and column- Rank-Theorems about ranks
11	Determinant
12	Cofactor and Cramer methods
13	Gauss method
14	Calcul of determinant