

Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MAT262	Linear Algebra II	4	4	0	0	4	7

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	Get to grips with basis Linear Algebra.
Content	Matrices. Reduction of Endomorphisms (diagonalisation, trigonalisation, polynomial of endomorphisms).
References	Linear algebra done right, Sheldon Axler- Springer. Algèbre Linéaire I-II Note de cours- Ecole Polytechnique Fédérale de Lausanne.

Theory Topics

Week	Weekly Contents
1	Reminders of Linear Algebra I
2	Determinant
3	Eigenvalues-Eigenvectors
4	Eigenvalues-Eigenvectors
5	Diagonalisation
6	Invariant subspaces on real vector spaces
7	Mid-term examination
8	Inner product spaces
9	Orthonormal basis, Gram-Schmidt procedure
10	Operators
11	Operators on inner product spaces
12	Operators on complex vector spaces
13	Generalized eigenvalues, characteristic polynomial
14	Minimum polynomial, Cayley-Hamilton theorem, Trace of a matrix