Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MAT116	Analytic Geometry	2	4	0	0	4	6

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	Acquisition of basic notions of planar analytical geometry and complex numbers. Getting used to mathematical reasoning methodology and French mathematical jargon.
Content	Complex numbers. Polar representation. Planar coordinates, orthogonal coordinates, polar coordinates, homogeneuos coordinates. Coordinate transformations in the plane. Curves, classification of plane curves, Karmaşık sayılar. Kutupsal temsil. Düzlemsel koordinatlar, dik koordinatlar, koordinatlar, kutupsal koordinatlar, homojen koordinatlar, uzayda dik koordinatlar, Düzlemde Koordinat Dönüşümler, Eğriler, düzlem eğrilerinin tasnifi, cebirsel eğri örnekleri, konikler, çemberler
References	Géométrie, Cours et Exercices, A. Warusfel et al., Vuibert 2002 Géométrie élémentaire, André Gramain, Hermann, 1997. Précis de géométrie analytique, G.Papelier, Vuibert 1950. Exercises de géométrie analytique, P.Aubert, G.Papelier,Vuibert 1953. Cours de géométrie analytique, B. Niewenglowski, Gauthier-Villars, 1894.

Theory Topics

Week	Weekly Contents
1	Complex numbers
2	Complex numbers
3	Plane geometry and cartesian coordinates
4	scalar product
5	Determinant and oriented angles
6	Cartesian reference systems
7	Lines in the plane
8	Circles in the plane
9	Mid-term examination
10	Circles
11	Plane curves
12	The group of affine transformations
13	Introduction to the space geometry
14	Cartesian, spherical and cylindirical coordinates