



Course Specifications of MATH 3140

Course No.	Course Title	No. of Units			Pre-requisites
		Th.	Pr.	Credit	
MATH 3140	Algebra and Geometry	3	-	3	--

Course Objectives:

The main objectives of this course are to make the student aware by:

- The basic laws of algebraic operations.
- The essentials of counting principles and the binomial theorem.
- The evaluation of determinants and their properties as well as introduction to matrix algebra.
- The concepts of points and lines and their relations.
- The equations of circles and the relation between two circles.
- The classification of conc sections and their properties.

Course Description:

Algebra and Geometry is an obligatory course in the first level of the common first year, it is designed to serve all other scientific programs. The course works to transfer students from high school to university studies by introducing some basic mathematical topics and concepts in a more depth. The course consists of two tracks: The first is the algebra track consists of three branches of equal weights (Sets and their laws – Permutations, Combinations, and the binomial theorem – Determinants, matrices, and simple linear systems).

The second is the geometry track is concerned with the study of plane geometry (points and their distances - lines – pair of lines – conic sections – relation between two circles).

Main Textbook:

- R. N., Barker, V.C., Nation, R.D., College Algebra, Aufmann, 7th Edition,

Subsidiary Books:

- Brooks, 2011. S. Lipschutz, Set theory and related topics, 2nd Edition, 1998.