Analytic Geometry

Unit Title	Analytic Geometry		
Level of Study	Level I – Bachelor's degree		
Credit Value	7	ECTS Value	3
Home Department	Fundamental Mathematics		
Home Faculty	Mathematics and Mechanics		
Unit Co-ordinator			
Key Words	vectors, coordinates, straight lines, planes, surfaces		
Brief Summary	Introduction of basic notions analytic geometry (vectors, coordinates, straight lines, planes, quadric surfaces, cylindrical, conical and rotation surfaces), the study of their properties and the relations between them by means of the geometric transformations.		
Indicative Content	Students will study: • operations with geometric vectors; • affine and metric problems; • equations of the straight line in the plane, plane and straight line in space for different ways of setting; • lines of the second order: ellipse, hyperbola, parabola; • equations of cylindrical, conical surfaces and surfaces of rotation; • cross-section method for the surfaces of the second order.		