

Math 115 Analytic Geometry
2014-2015 Fall Semester

Textbook: Analytic Geometry, H. İ. Karakaş, METU, 2011

References: Any Calculus and Analytic Geometry Book

(Tentative) Course Outline

Week	Topics	Sections
22 Sept	Fundamental Principles of Analytic Geometry Cartesian Coordinates in \mathbf{R}^2 and \mathbf{R}^3 Straight Lines in \mathbf{R}^2	1.5 2.1, 2.7 2.2
29 Sept	Graphs of Relations $\mathbf{R} \rightarrow \mathbf{R}$, Polar Coordinates	2.3 2.5
6 Oct	Change of Coordinates: Rotation and Translations	2.6
13 Oct	Directed Line Segments and Vectors in \mathbf{R}^2 and \mathbf{R}^3 Algebra of Vectors in \mathbf{R}^2 and \mathbf{R}^3	3.1, 5.1 3.2, 5.2
20 Oct	Scalar Product, Angle Between Two Vectors	3.3, 5.3
27 Oc	Review	
First Midterm Exam (on October 30 th , 2014 at 17:40)		
3 Nov	Cross Product Straight Lines in \mathbf{R}^3	5.4 5.5
10 Nov	Straight Lines in \mathbf{R}^2 , Half Lines and Line Segments Planes	3.4 5.6
17 Nov	Distances, Bisectors, Symmetry etc.	3.5, 5.7
24 Nov	Conic Sections: Fundamental Definitions The Parabola,	4.1 4.2
1 Dec	Central Conics, The Ellipse	4.3, 4.4
Second Midterm Exam (on December 2 nd , 2012 at 17:40)		
8 Dec	The Hyperbola, Asymptotes of a Hyperbola	4.5, 4.6
15 Dec	The General Quadratic Equation	4.7
22 Dec	Surfaces, Spheres and Cylinders	8, 8.2
29 Dec	Surfaces of Revolution, Canonical Equations of Quadric Surfaces	8.2, 8.3

First Midterm %25

Second Midterm %35

Final Exam %40

Section 01 – Ali Doğanaksoy

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