

Math 115 Analytic Geometry
2016-2017 Fall Semester

Textbook: Analytic Geometry, H. İ. Karakaş, METU, 2011
References: Any Calculus and Analytic Geometry Book

Course Outline

Week	Topics	Sections
3 Oct	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
10 Oct	Graphs of Relations $\mathbf{R} \rightarrow \mathbf{R}$, Polar Coordinates	2.3 2.5
17 Oct	Change of Coordinates: Rotation and Translations	2.6
24 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
31 Oct	Scalar Product, Angle Between Two Vectors	3.3, 5.3
First Midterm Exam (on November 4 th , 2016 at 17:40)		
7 Nov	Cross Product Straight Lines in \mathbf{R}^3	5.4 5.5
14 Nov	Straight Lines in \mathbf{R}^2 , Half Lines and Line Segments Planes	3.4 5.6
21 Nov	Distances, Bisectors, Symmetry etc.	3.5, 5.7
28 Nov	Conic Sections: Fundamental Definitions The Parabola,	4.1 4.2
5 Dec	Central Conics, The Ellipse	4.3, 4.4
Second Midterm Exam (on December 9 th , 2016 at 17:40)		
12 Dec	The Hyperbola, Asymptotes of a Hyperbola	4.5, 4.6
19 Dec	The General Quadratic Equation	4.7
26 Dec	Surfaces, Spheres and Cylinders	8, 8.2
2 Jan	Surfaces of Revolution, Canonical Equations of Quadric Surfaces	8.2, 8.3
Final Exam (on January 14 th , 2017)		

First Midterm %25

Second Midterm %35

Final Exam %40

Students which collect not more than %20 of total full grade in midterm exams will not be accepted to final exam and will be assigned letter grade NA.

Section 01	Ali Doğanaksoy	Mon 11:40-12:30 / Wed 13:40-15:30 / M105
Section 02	Yasemin Talu	Mon 10:40-11:30 / Wed 08:40-10:30 / M105
Section 03	Süleyman Önal	Mon 12:40-13:30 / Thu 10:40-12:30 / M105
Section 04	Mohan Bhupal	Tue 10:40-12:30 / Thu 12:40-13:30 / M105
Section 05	Sergey Finashin	Tue 10:40-12:30 / Thu 12:40-13:30 / M102