MBY0001

ANALYSIS
FALL 2011-2012

INSTRUCTOR: Tunc Misirlioglu

GOAL: The aim of this course in elementary mathematical analysis is to develop rapidly differential and integral calculus for real-valued functions of one real variable, giving relevance to the discussion of some differential equations and maximum principles. This course is mainly geared toward students studying the basic principles of mathematical analysis. However, given its selection of problems, organization, and level, it will be in the form of problem-solving seminars.

PLACE: Istanbul Kultur University

TIMETABLE: Thursday 12:00-15:00

CONTACT: t.misirlioglu@iku.edu.tr

ASSESSMENT: Thirty percent of the midterm, the final forty percent

PRE-REQUISITIES: Mathematical Analysis in undergraduate level

PRINCIPAL TEXTBOOK: T.T. Radulescu, V.D. Radulescu, and T. Andreescu, Problems in Real Analysis, Springer, 2009

SUGGESTED READING: W. Rudin, Principles of Mathematical Analysis, McGraw-Hill, 1976

PROGRAMME

WEEKS	SUBJECTS TO BE COVERED
1 & 2	Sequences. Series.
3 & 4	Limits of Functions. Continuity.
5 & 6	Differentiability. Convex Functions.
7 & 8	Inequalities. Extremum Problems.
Will be announced	**Mid-term Exam**
9 & 10	Antiderivatives.
11 & 12	Riemann Integrability.
13 & 14	Applications of Integral Calculus.
Will be announced	**Final Examination**