BSM, Functional Analysis, Spring 2012

Instructor: Viktor Harangi. E-mail: `harangi@gmail.com`

Class: Monday 12-14, Wednesday 10-12 (Room 104).

Web page: www.renyi.hu/~harangi/bsm/

Course description: the course provides an introduction to the basic concepts of the theory of function spaces and functional analysis with special emphasis on problem solving.

Prerequisite: real analysis and linear algebra.

Text: *Principles of Functional Analysis, Second Edition (Graduate Studies in Mathematics)* by Martin Schechter, American Mathematical Society 2001.
This is an introductory functional analysis textbook that contains (most of) the theorems of this course. However, we will not follow the book closely.

Homework: Homework problems will be assigned every week. They are due next Monday. Easy problems are worth about 5 points, normal problems 10 points, and hard problems 20 points. You can hand in as many problems as you like. However, you can obtain at most 20 points each week.

   You are allowed to collaborate with other students while working on these problems. However, I ask you not to tell each other complete solutions. Also, you must write up your solutions on your own.

Midterm and final exam: The midterm exam will be on Monday, March 26, 12:15-14:00. The final exam is scheduled for Monday, May 21, 12:00-14:00. The final exam will be cumulative with more emphasis on the second part of the material. There will be six problems on both exams. For grading the exams I plan to use the following scale.
70%-100%=A ; 51%-69%=B ; 35%-50%=C ; 20%-34%=D.

Grades: In your final grade the homework, the midterm and the final exam count as 30%, 30% and 40%, respectively.