Applied Functional Analysis

Prof. Gianluigi Pillonetto

Dept. of Information Engineering
University of Padova
Email: giapi@dei.unipd.it

Timetable: 28 hrs. Class meets on Tuesday and Thursday from 10:30 to 12:30. First lecture on Tuesday, September 10, 2012. Room DEI/G (Dept. of Information Engineering).

Course requirements: The classical theory of functions of real variable: limits and continuity, differentiation and Riemann integration, infinite series and uniform convergence. The arithmetic of complex numbers and the basic properties of the complex exponential function. Some elementary set theory. A bit of linear algebra.

Examination and grading: Homework assignments and final test.

Aim: The course is intended to give a survey of the basic aspects of functional analysis, operator theory in Hilbert spaces, regularization theory and inverse problems.

Course contents:


All the necessary material can be found in W. Rudin’s book Principles of Mathematical Analysis (3rd ed., McGraw-Hill, 1976). A summary of the relevant facts will be given in the first lecture.

References: