

Functional Analysis 2

Course Syllabus

Fall Term 2010 — SNU

Course Title	Functional Analysis 2 (in English)
Course number	3341.604
Instructor	Gerald Trutnau
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Course homepage	http://www.math.snu.ac.kr/~trutnau/teachingFA2.html
Course Objective	<p>We will study: finite dimensional approximations (Ritz-Galerkin approximation), compact operators (compact embeddings and integral operators), spectrum of compact operators, self-adjoint operators, and also additional properties of Sobolev functions. We may also study some other topics that will be precised later in some update.</p> <p>There will be less homework than last semester.</p>
References	<p>Recommended references:</p> <ul style="list-style-type: none">- Brézis, Haïm: Analyse fonctionnelle, Dunod (2002)- Lax, Peter D.: Functional Analysis, Wiley-Interscience (2002)- Rudin, Walter: Functional Analysis, McGraw-Hill, 2 edition (1991)- Yoshida, Kôsaku: Functional Analysis (Springer Classics in Mathematics) (6th edition, 1980)- Zeidler, Eberhard: Applied Functional Analysis: Applications to Mathematical Physics (Applied Mathematical Sciences) (v. 108) , Springer (1995)- Zeidler, Eberhard: Applied Functional Analysis: Main Principles and Their Applications (Applied Mathematical Sciences) (v. 109) , Springer (1999)

Evaluation - Attendance: (will not be checked). However, students are supposed to know the material taught in class.

- (If TA is assigned) Assignment sheets (40 % of final score);

Students must solve exercises regularly, and will be given assignment sheets mostly every week.

- Take Home Exam I (7-8th week, 25 % (45 % if TA is not assigned) of final score);

- Take Home Exam II (14-15th week, 25 % (45 % if TA is not assigned) of final score);

Other: (10 % of final score)