Functional Analysis - Math 420/510
Spring 2018

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- **Web page:** The course website is

  http://www.math.ubc.ca/~malabika/teaching/ubc/spring18/math420-510/index.html

Homework assignments and all relevant course information (such as changes to office hours if any, or solutions to quiz and homework problems) will be posted here.

- **Text:** *Real Analysis: Modern Techniques and Their Applications*, by Gerald Folland. This is the same textbook as in the earlier course in this sequence Math 420/507. Supplementary material may be found in "A first course in functional analysis" by John B. Conway, and "Functional Analysis" by Peter Lax.

- **Pre-requisite:** Math 420/507 (or equivalent).

- **Course outline:** The UBC course description is as follows:
  - Banach spaces
  - Linear operators
  - Bounded and compact operators
  - Strong, weak, and weak* topology
  - Hahn-Banach, open mapping, and closed graph theorems
  - Hilbert spaces
  - Symmetric and self-adjoint operators
  - Spectral theory for bounded operators.

The core topics of this course are contained in Chapters 5, 6 and 7 of the textbook. Time permitting, we will also consider other special topics.

- **Lectures:** Tuesday and Thursday 11 am - 12:30 pm in Mathematics 203.

- **Grading Policy:** Homework problem sets, due every other week, will be posted regularly on the course website. In addition, there will be a take-home final exam, and a weekly short quiz at the end of class every Thursday, starting January 11. Your total score will be a weighted average of your homework, quiz and final scores, with the breakdown as follows.

Homework	25%
Quizzes	25%
Final exam	50%