Functional Analysis - Math 421/510
Spring 2007

• Instructor: Malabika Pramanik
• Office: Mathematics Building, Room 214
• Phone: (604)822-2855
• Email: malabika@math.ubc.ca
• Office hours: Monday and Wednesday 1:00 - 2:00 PM, or by appointment.

• Web page: The course website is
  http://www.math.ubc.ca/~malabika/teaching/ubc/spring07/math421-510/index.html
Homework assignments and all relevant course information (such as changes to office hours if any, or solutions to homework problems if needed) will be posted here.

• Text: A Course in Functional Analysis by J. B. Conway.

• Course outline: The core topics of this course are
  ○ Banach spaces
  ○ Operator spaces; strong, weak, and weak* topologies
  ○ Hilbert spaces and their geometry
  ○ Operators on Hilbert spaces: self-adjoint, bounded, compact
  ○ Hahn-Banach Theorem
  ○ Open Mapping Theorem
  ○ Closed Graph Theorem
  ○ Spectral Theory for Bounded Operators
  ○ Fredholm Theory for Bounded Operators
Time permitting, we will also consider other special topics.

• Lectures: Monday, Wednesday, Friday 9-10 am in Math 103.

• Grading Policy: Homework problems will be posted regularly on the course website. In addition, there will be a takehome midterm and a takehome final. You total score will be a weighted average of your homework, midterm and final scores, with the breakdown as follows.
  
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</td>
<td>50%</td>
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<tr>
<td>Midterm</td>
<td>25%</td>
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<tr>
<td>Final exam</td>
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