

Math 4567

Applied Fourier Analysis, Spring 2018

SYLLABUS

Time and Place: 1:25 pm - 2:15 pm MWF – Vincent Hall 20
Text: J.W. Brown, R.V. Churchill. Fourier Series and Boundary Value Problems. **8th Edition.**
Instructor: Sergey G. Bobkov
Office: 228 VinH (tel: 625-1840, email: bobkov@math.umn.edu)
Office hours: 12:20 pm - 1:10 pm F and by appointment

4567. Applied Fourier Analysis.

Orthonormal functions, best approximation in the mean. Fourier series, convergence point-wise and in the mean. Applications to boundary value problems. Sturm-Liouville equations, eigenfunctions. Fourier transform and its applications.

WEEK	DATES	MATERIAL (preliminary distribution)
1	01-17 to 01-19	Review of Lebesgue integration
2	01-22 to 01-26	Chapter 7
3	01-29 to 02-02	Chapter 1
4	02-05 to 02-09	Chapter 2; Test 1
5	02-12 to 02-16	Chapter 2
6	02-19 to 02-23	Chapter 3
7	02-26 to 03-02	Chapter 3
8	03-05 to 03-09	Chapter 4
	03-12 to 03-16	(Spring break)
9	03-19 to 03-23	Chapter 5; Test 2
10	03-26 to 03-30	Chapter 8
11	04-02 to 04-06	Chapter 8
12	04-09 to 04-13	Chapter 8
13	04-16 to 04-20	Chapter 6
14	04-23 to 04-27	Chapter 6
15	04-30 to 05-04	Chapter 6; Test 3

Homeworks: You will have 5 homeworks due on Mondays:
February 5, 26, March 26, April 9, 30

Tests: Wednesday, February 7, 2018
Friday, March 30, 2018
Friday, May 4, 2018

Composition of grade: Every test: 25% of total grade
Homeworks: 25% of total grade