

# King Fahd University of Petroleum and Minerals

Department of Mathematics and Statistics

## SYLLABUS

Semester II, 2012-2013 (122)

(Dr. Rajai Alassar, [Alassar@kfupm.edu.sa](mailto:Alassar@kfupm.edu.sa))

**Course #:** Math 513

**Title:** Mathematical Methods for Engineers

**Textbook:** Advanced Engineering Mathematics with MatLab, Dean G. Duffy, 3<sup>rd</sup> Edition

Week	Chapters	Material	Homework
1-2	4	Fourier Series	Handout
3-4	5	The Fourier Transform	Handout
5-6	6	The Laplace Transform	Handout
7-8	9	The Sturm-Liouville Problem	9.1.8 9.2.2 9.3.2 9.4.4 9.4.8 9.5.12 9.5.24
Midterm Break: March 23 – 27 March 2013			
9-10	10	The Wave Equation	10.3.8 10.4.4 10.5.3 + Handout
11	11	The Heat Equation	11.3.37 11.5.4 + Handout
12	12	The Laplace Equation	12.3.35 + Handout
13-14	14	Linear Algebra	Handout
15		Catch up – Presentations	

**Grading policy:** Homework 15%, Project 10%, (Two Major Exams + Final Exam) 75%.