King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
SYLLABUS
Semester I, 2013-2014 (131)
(Dr. Muhammad Yousuf)

Course #: Math 513
Title: Mathematical Methods for Engineers
Textbook: Advanced Engineering Mathematics with MatLab, Dean G. Duffy, 3rd Edition
Extra References
- Beginning Partial Differential Equations, P. V. O"Neil.
- Advanced Engineering Mathematics by Zill and Wright.

Objective: This course aims to introduce some necessary concepts of Engineering Mathematical Methods such as Fourier and Laplace transforms, Sturm-Liouville problems, basic PDE’s, and some matrix theory.

Outcomes: By the end of this course, the student should be able to
- perform the Fourier and Laplace transforms of some commonly used functions
- solve the basic linear Laplace, wave, and heat equations and Sturm-Liouville problems
- solving and computing solutions to systems of linear equations
- using Matlab to solve computational problems

Grading Policy: Project, Homework and Assignments 30%, Midterm 30%, Final 40%
## Teaching Schedule

<table>
<thead>
<tr>
<th>Day/Time</th>
<th>12-12:50</th>
<th>1-1:50</th>
<th>4-4:50</th>
<th>5-6:15</th>
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<tr>
<td>Sunday</td>
<td>Office Hour R: 5-403</td>
<td>Math 201 R: 59-1011</td>
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<td>Math 513 R: 6-106</td>
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