

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics

SYLLABUS MATH 301

Semester 103

Instructor: M. Yousuf

Course	Math 301
Title	Methods of Applied Mathematics
Textbook	Advanced Engineering Mathematics by Zill and Cullen (Fourth Edition, 2006).

Week	Date	Sec.	Material	Homework
1	June 25 – 29	9.1 9.5 9.7 9.8	Vector Functions The Directional Derivative Divergence and Curl Line Integrals	3,11,20,25,28,41 3,6,9,13,21,30 8,14,23,30 5,10,16,22,30
2	July 02 – 06	9.9 9.12 9.13 9.14	Independent of the Path Green's Theorem Surface Integrals Stokes' Theorem	7,15,18,23,28 2,6,17,25 3,11,26,33 3,6,14,17
3	July 09 – 13	9.16 4.1 4.2 4.3	Divergence Theorem Definition of the Laplace transform Inverse Transform, Transforms of Derivatives Translation Theorems	2,4,11 3,5,17, 29,33,38 5,13,15,19,35,36 8,13,20,24, 47,60,66
First Major Exam Saturday, July 16, 2011				
4	July 16 – 20	4.4 4.5 12.1 12.2	Additional Properties Dirac Delta Function Orthogonal Functions Fourier Series	5,16,19,23,34, 45 4,8,12 6,12,16,18 4,6,16,20
5	July 23 – 27	12.3 12.5 12.6	Fourier Cosine and Sine Series Sturm-Liouville Theorem Bessel and Legendre Series	4,6,14,16,26,38 2,4,6,8,14 2,4,6,8,10,20
6	July 30 – Aug 03	13.1 13.3 13.4 13.5	Separable Partial Differential Equation Heat Equation Wave Equation Laplace's Equation	2,10,14,18,20,24,28 2,4,6 2,4,6,8,10 2,4,8,10,14
Second Major Exam Saturday, Aug 06, 2011				
7	Aug 06 – 10	14.2 14.3 15.2	Problems in Polar and Cylindrical Coordinates Problems in Spherical Coordinates Applications of the Laplace Transform	2,4,8,10 4,6,12 6,8,10,14,27
8	Aug 13 – 15	15.3 15.4	Fourier Integrals Fourier Transforms	1,4,10 6,10,12,16,18
Final Exam Thursday August 26, 2010 at 08:00 am.				

Important Dates

July 02	Last day for dropping course(s) without permanent record
July 20	Last day for dropping course(s) with grade of "W" thru http://regweb.kfupm.edu.sa
July 27	Last day for withdrawal from all courses with grade of "W" thru the Registrar Office
Aug 10	Last day for withdrawal from all courses with grade of "WP/WF" thru the Registrar Office

Note

KFUPM attendance policy will be enforced strictly. Final Exam shall be comprehensive.	
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Grading Policy: Two Majors each 25%; Quizzes 10%; HW 3%; Attend. 2 %; Final 35%	