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

SYLLABUS MATH 302
Semester 093
Instructor: M. Yousuf

Course	Math 302
Title	Engineering Mathematics
Textbook	Advanced Engineering Mathematics by P. O'Neil, **International Student Edition**.

Week	Date	Sec.	Material	Homework
1	July 03 – 07	6.4	The Vector Space R^n	5*,8*,16*
		6.5	Linear Dependence and Independence	6*,14*,17*,24
		7.5	Homog. Systems of Linear Equations	3*,6*
		7.7	Non-homogeneous Systems	9*,13,14*
		7.8	Matrix Inverse	2,8*,16,17*
2	July 10 – 14	9.1	Eigenvalues and Eigenvectors	6,12*,17*,19*,20
		9.2	Diagonalization	4*,6,7*,12*
		9.3	Orthogonal and Symmetric Matrices	1*,6*,12
		12.1	Vector Functions of one Variable	3,6*,12*
		12.4	The Gradient Field	6*,8,14*,20
3	July 17 – 21	12.5	Divergence and Curl	2*,6,10*,13,16*
		13.1	Line Integrals	4,6*,10,15*
		13.2	Green's Theorem	3,6*,11*,12,13*
		13.3	Independence of Path and Potential Theory	4,8*,10,14*
First Major Exam Saturday, July 24, 2010				
4	July 24 – 28	13.4	Surface Integrals	2,7*,8*,10
		13.7	Divergence Theorem of Gauss	2,4*,7,8,9,12*
		13.8	The integral theorem of Stokes	4,6*,14*,20*
		20.1	Complex Number (Polar Form)	8,14*,22*,28*,29
5	July 31 – Aug 04	20.2	Loci and Sets of Points in the plane **(20.2.1 – 20.2.3)**	1,2,6*,7,13*,18*
		21.1	Complex Functions, Limits and Continuity, Cauchy-Riemann Equations	2,3,4*,5,6*,12*
		21.2	Power Series	3*,9*,11*
6	Aug 07 – 11	21.3	The Exponential and Trig. Functions	2,4*,8,11*,13*,19*
		21.4	The Complex Logarithm	3,4*,6*,8
		21.5	Powers **(21.5.1 - 21.5.3)**	6*,8*,11*,12*,13
		22.1	Curves in the plane (Quick Review)	1,3,7,9
		22.2	Integration of Complex Function	2*,5*,8,15*
Second Major Exam Saturday, Aug 14, 2010				
7	Aug 14 – 18	22.3	Cauchy's Theorem	2*,4,5*,8,12*
		22.4	Consequences of Cauchy's Theorem	4*, 6*,8,14*
		23.1	Taylor Series (Defns & examples)	1,4*,5,10*
		23.2	Laurent Series (Defns & examples)	2,3*,5*,6*,7,8
		24.1	Singularities	3,4*,5*,6*,10,14*
8	Aug 21 – 23	24.2	The Residue Theorem	1,2*,3*,5,9*,15,16*
		24.3.3	Evaluation of Real Integrals	10,12,14,15,18
Final Exam Tuesday August 24, 2010 at 12:30 pm				

Important Dates

July 10	Last day for dropping course(s) without permanent record
July 28	Last day for dropping course(s) with grade of "W" thru **http://regweb.kfupm.edu.sa**
Aug 04	Last day for withdrawal from all courses with grade of "W" thru the Registrar Office
Aug 18	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.
Office: 5-403   **Tel**: 860- 7196   **E-mail**: myousuf@kfupm.edu.sa
webpage http://faculty.kfupm.edu.sa/math/myousuf
Grading Policy: Two Majors each 25%; Quizzes 10%; HW 3%; Attend. 2 %; Final 35%