

King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
SYLLABUS
Semester I, 2006-2007 (061)
(Coordinator: Dr. A Lyaghfour)

Course #:	Math 202
Title:	Elements of Differential Equations
Textbook:	A First Course in Differential Equations by D.G. Zill, 8 th Edition.

Wk	Date	Sec.	Section Title	Homework
1	Sep. 9-14*	1.1 1.2	Definitions and Terminology Initial Value Problems	16, 18, 21, 26, 28 6, 10, 14, 20, 26
2	Sep. 16-20	2.1 2.2	Solution curves Separable Variables	1, 4, 8, 16, 22 8, 12, 20, 24, 44
3	Sep. 25**-27	2.3 2.4	Linear Equations Exact Equations	8, 12, 16, 24, 30 4, 6, 10, 22, 30, 36
4	Sep. 30-Oct .4	2.5 3.1	Solutions by Substitutions Linear Models	6, 10, 12, 14, 18, 26 4, 8, 10, 14, 28
First Major Exam: Sunday Oct. 8, 2006				
5	Oct .7-11	4.1.1 4.1.2	Initial and Boundary-Value Problems Homogeneous Equations	4, 6, 7, 10, 14a) 18, 20, 24, 28, 30
Id al-Fitr Vacation: October 12, 2006 – October 27, 2006				
6	Oct .28-Nov. 1	4.1.3 4.2	Nonhomogeneous Equations Reduction of Order	32, 33, 34, 36, 40 4, 6, 12, 14, 20
7	Nov.4-8	4.3 4.5	Homogeneous Linear Equations with Constant Coefficients Undetermined Coefficients Annihilator Approach	14, 18, 24, 32, 40 10, 14, 26, 32, 54, 64
8	Nov.11-15	4.6 4.7	Variation of Parameters Cauchy-Euler Equation	12, 14, 18, 24, 30 6, 14, 18, 22, 36
9	Nov.18-22	6.1 6.1.1	Solutions about Ordinary Points Review of Power Series	
10	Nov.25-29	6.1.2	Power Series Solutions	2, 4, 6, 8, 10, 11, 12 14, 22, 24, 26, 28, 30
11	Dec.2-6	6.2	Solutions about Singular Points	4, 8, 14, 16, 20, 32
Second Major Exam: Wednesday Dec. 13, 2006				
12	Dec.9-13	A.II	Matrices, Gauss Elimination Eigenvalue Problem	18, 22, 24, 38, 42 48, 52, 56, 62
13	Dec.16-20	8.1 8.2 8.2.1	Preliminary Theory Homogeneous Linear Systems Distinct Real Eigenvalues	6, 8, 16, 18, 20, 26 4, 8, 10, 12
Id al-Adha Vacation: December 21, 2006-January 5, 2007				
14	Jan.6-10	8.2.2 8.2.3	Repeated Eigenvalues Complex Eigenvalues	20, 22, 24, 26, 30 34, 38, 40, 44, 46
15	Jan.13-17	8.3 8.4	Nonhomogeneous Linear Systems Exponential Matrix	1, 3, 8,13, 18

*Thursday 14 September is a normal Saturday class

**Saturday 23 September is a national holiday.

CAS assignments are at the discretion of the instructor.

KFUPM attendance policy will be enforced. **DN grade for 9 and more unexcused absences.**

