King Fahd University of Petroleum & Minerals
CIVIL ENGINEERING DEPARTMENT

STRUCTURAL ANALYSIS I (Term 091)
CE 305-01

Textbook : **Structural Analysis (6th edition) by R.C. Hibbeler**
Instructor: **Dr. Abdulrahman Khathlan**
Office : **16-138** **Tel: 2683**
E-mail : **khathlan@kfupm.edu.sa**

COURSE OUTLINE & SCHEDULE

Date	Lecture	Subject	Section #
Oct. 03	1	Introduction	--------
05	2	Structures and Equilibrium	2.1-2.2
07	3	Statically Determinate Structures	2.3-2.5
10	4	Shear & Moment Diagrams for Beams	4.1-4.2
12	5	Shear & Moment Diagrams for Beams	4.3
14	6	Shear & Moment Diagrams for Frames	4.4
17	7	Shear & Moment Diagrams for Frames	4.4
19	8	Influence Lines	6.1-6.2
21	9	Influence Lines for Beams	6.3
24	10	Influence Lines for Beams	6.3
26	11	Influence Lines for Trusses	6.5
28	12	Influence Lines for Trusses	6.5
Oct. 31	13	Deflection of Beams	8.1-8.2
Nov. 02	14	Conjugate Beam	8.5
04	15	Conjugate Beam Method	8.5
07	16	Conjugate Beam Method	8.5
09	17	Work & Energy	9.1-9.3
11	18	Virtual Work for Trusses	9.4
14	19	Virtual Work for Beams	9.5
16	20	Virtual Work for Beams & Frames	9.5
18	21	Virtual Work for Beams & Frames	9.5
Nov. 19 – Dec. 04, 2009 : Eid Al-Adha (Hajj) Break			
Dec. 05	22	Castigliano's Theorem for Trusses	9.7-9.8
07	23	Castigliano's Theorem for Beams & Frames	9.9
09	24	Statically Indeterminate Structures	10.1-10.2

Date	Lecture	Subject	Section
Dec. 12	25	Maxwell Theorem	10.3
14	26	Force Method for Beams	10.4
16	27	Force Method for Beams	10.4
19	28	Force Method for Frames	10.5
21	29	Structural Analysis using the Computer	Handout
23	30	Structural Analysis using the Computer	Handout
26	31	Slope-Deflection Equations	11.1
28	32	Slope-Deflection Method for Beams	11.2
30	33	Slope-Deflection Method for Beams	11.2
Jan.'10 02	34	Slope-Deflection Method for Beams	11.3
04	35	Moment Distribution Method	12.1
06	36	Moment Distribution Method for Beams	12.2
09	37	Moment Distribution Method for Beams	12.3
11	38	Moment Distribution Method for Frames	12.4
13	39	Moment Distribution Method for Frames	12.4
16	40	The Stiffness Method	15.1
18	41	The Stiffness Matrix for Beams	15.2-15.3
20	42	The Stiffness Method for Beams	15.4
23	43	The Stiffness Method for Frames	Notes
25	44	The Stiffness Method for Frames	Notes
27	45	Review	-----

Grade Distribution:

Attendance & Class	:	5%
Homework & Quizzes	:	15%
First Major Exam	:	25%
Second Major Exam	:	25%
Final Exam	:	30%
		100%

Note: (1) The University regulations regarding excessive absences will be strictly adhered to in this course. See the Undergraduate Bulletin for details.

(2) All homeworks are to be submitted neatly with a cover page in due date. Late submission will not be accepted.

(3) All submitted homeworks must represent the students' own, and individual, effort. Plagiarism will not be tolerated, as per KFUPM policies.