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

SYLLABUS
MATH 201

Summer (083)

Coordinator: Dr.M.Aslam Chaudhry

Course #: Math 201

Title: Calculus III

Textbook: Calculus (Early Transcendentals): by James Stewart; **Fifth edition (2003)**

Course Description: The concepts studied in Math 201 include solid analytic geometry, vectors and surfaces, differentiation of functions of several variables and multiple integrals.

Week	Date	Sec. #	Topics
01	July 11-15	10.1 10.2	Curves Defined by Parametric Equations Calculus with Parametric Curves
01	---------	10.3 10.4	Polar Coordinates Areas and Lengths in Polar Coordinates
02	July 18-22	12.1 12.2 12.3	Three-Dimensional Coordinate Systems Vectors The Dot Product
02	----------	12.4 12.5	The Cross Product Equations of Lines and Planes
03	July 25-29	12.6 12.7	Cylinders and Quadric Surfaces Cylindrical and Spherical Coordinates
Major Exam I: Tuesday July 28 , 2009 Bldg.54 (8:30- 10:30PM)			**Exam I Material: 10.1-12.5**
03	----------	12.7 14.1 14.2	Cylindrical and Spherical Coordinates (Contd.) Functions of Several Variables Limits and Continuity
04	August 01-05	14.2 14.3	Limits and Continuity (Contd.) Partial Derivatives
04	----------	14.4 14.5	Tangent Planes & Linear Approximation The Chain Rule
05	August 08-12	14.6 14.7	Directional Derivatives and the Gradient Vector Maximum and Minimum Values
05	----------	14.7 14.8	Max. and Min. Values (Contd.) Lagrange Multipliers
06	August 15-19	15.1 15.2	Double Integrals over Rectangles Iterated Integrals
Major Exam II: Tuesday August 18, 2009, Bldg. 54(8:30-10-30PM)			**Exam II Material: 12. 6-14.7**
06	----------	15.2 15.3	Iterated Integrals (Contd.) Double Integrals over General Regions
07	August 22-24	15.3 15.4	Double Integrals over General Regions (Contd.) Double Integrals in Polar Coordinates
07	----------	15.7 15.8	Triple Integrals Integrals in Cylindrical and Spherical Coordinates
08	August 29-31		Review/ Catch up
Final Exam will be Comprehensive and MCQ			

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Suggested Homework Problems*

Sec. #	Suggested Homework Problems
10.1	3,6,11,24,26
10.2	5,13,36,43
10.3	9,22,29,40,48,54
10.4	3,6,8,31,35,40
12.1	6,10,14,18,21,25,29,37,41
12.2	8,18,24,28,32
12.3	8,10,23,37,41,52
12.4	26,33,36,39,45
12.5	16,17,30,38,51,61,73
12.6	5,9,11,21-28
12.7	13,20,23,28,34,36,50
14.1	6,11,30,32
14.2	11,28,37,39
14.3	16,21,51,66,83
14.4	12,16,20,24,31
14.5	8,16,17,22,28,36
14.6	9,15,23,27,36,38,41,48
14.7	3,5,11,37
14.8	4,10,23,25,39
15.1	6,8,12,17
15.2	8,11,14,19
15.3	3,16,24,39,43,50,52
15.4	3,7,10,18,21,33,36
15.7	3,823,26,29,31,38
15.8	8,9,18,33,36

- The students are advised to understand all solved examples. These examples are a part the Exam.
- The students are strongly urged to solve **much more problems** than the homework listed above.