

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

Math 201-SYLLABUS
Term 2010-2011(103)

Coordinator Dr. M. Aslam Chaudhry
Course: Math 201, Calculus III
Text Book: Calculus (Early Transcendentals): by James Stewart; **6th edition (2008)**
Course Description: Math 201 is a continuation of Math 101 (Calculus I), and Math 102 (Calculus II). These courses are designed as an introduction to the fundamental concepts of calculus and analytic geometry. The concepts studied in Math 201 include solid analytic geometry, vectors and surfaces, differentiation of functions of several variables and multiple integrals.

W	Date	Sec.	Topics	Homework
1	June 25-29	10.1 10.2 10.3 10.4	Curves defined by Parametric Equations Calculus with Parametric Curves Polar Coordinates Areas and Lengths in Polar Coordinates	3,6,24,28,30 8,12,44 10,22,40,54 3,6,8,12,32,35,40
	July 2-6	12.1 12.2 12.3 12.4	Three-Dimensional Coordinate Systems Vectors The Dot Product The Cross Product	10,18,20,23,25,37,41 1,4,8,24,32 2,8,10,11,17,23,36,52 9,12,34,40,45
3	July 9-13	12.5 12.6	Equations of Lines and Planes Cylinders and Quadratic Surface	2,15,17,30,50,61,72 2,4,10,11,21-28
Exam I (25%): Tuesday, July 12, 2011: Material [10.1-12.5]				
4	July 16-20	14.1 14.2 14.3	Functions of Several Variables Limits and Continuity Partial Derivatives	2,6,30,32 3,10,11,37,39 4,5,21,51,83
5	July 23-27	14.4 14.5 14.6	Tangent Planes & Linear Approximation The Chain Rule Directional Derivatives and the Gradient Vector	12,16,24,31 8,16,18,28,36 6,9,16,23,36,38,41,48
6	July 31-Aug 3	14.7 14.8 15.1	Maximum and Minimum Values Lagrange Multiplier Double Integrals over Rectangles	3,5,12,37 4,10,25,39 3,6,8,17,18
Exam II (25%): Tuesday, August 02, 2011: Material [12.6-14.7]				
7	Aug 6-10	15.2 15.3 15.4	Iterated Integrals Double Integrals over General Regions Double Integrals in Polar Coordinates	5,8,11,19,23 5,10,16,39,43,51,58 4,7,10,21,33,36
8	Aug 13-15	15.6 15.7 15.8	Triple Integrals Triple Integrals in Cylindrical Coordinates Triple Integrals in spherical Coordinates	8,16,26,29,31,38,39 4,8,9,21, 28 1,5,17,21,30,35
Final Exam (35%): Tuesday, August 16, 2011 at 9:00 AM (Comprehensive)				

Class Work: 15%. It is based on quizzes, homework, or other class activities determined by the instructor. All quizzes must be of written type and not of multiple choice type.

- KFUPM policy with respect to attendance (**lectures and recitations**) will be strictly enforced.
- The students are strongly urged to solve much more problems than the homework listed above.