

King Fahd University of Petroleum and Minerals  
 Department of Mathematics and Statistics  
**Math 201 - SYLLABUS**  
**Semester III 2011-2012 (113)**  
 Coordinator: Dr. Ahmet Emin Tatar

**Course:** MATH 201  
**Title:** Calculus III  
**Credit:** 3-0-3  
**Textbook:** Calculus (Early Transcendentals), by James Stewart, 6th edition, 2008  
**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	Section	Topic
1	June 9 - 14	10.1	Curves defined by Parametric Equations
		10.2	Calculus with Parametric Curves
		10.3	Polar Coordinates
		10.4	Areas and Lengths in Polar Coordinates
2	June 16 - 20	12.1	Three-Dimensional Coordinate Systems
		12.2	Vectors
		12.3	The Dot Product
		12.4	The Cross Product
3	June 23 - 28	12.5	Equations of Lines and Planes
		12.6	Cylinders and Quadratic Surfaces
<b>First Major Exam (25 %) : Tuesday, June 26th 2012 Material: 10.1 - 12.5</b>			
4	June 30 - July 4	14.1	Functions of Several Variables
		14.2	Limits and Continuity
		14.3	Partial Derivatives
5	July 7 - 11	14.4	Tangent Planes and Linear Approximation
		14.5	The Chain Rule
		14.6	Directional Derivatives and the Gradient Vector
6	July 14 - 19	14.7	Maximum and Minimum Values
		14.8	Lagrange Multipliers
		15.1	Double Integrals over Rectangles
<b>Second Major Exam (25 %) : Tuesday, July 17th 2012 Material: 12.6 - 14.7</b>			
7	July 21 - 25	15.2	Iterated Integrals
		15.3	Double Integrals over General Regions
		15.4	Double Integrals in Polar Coordinates
8	July 28 - 30	15.6	Triple Integrals
		15.7	Triple Integrals in Cylindrical Coordinates
		15.8	Triple Integrals in Spherical Coordinates
<b>Final Exam (35 %) : Thursday, August 2nd 2012 at 8:30 am Material: Comprehensive</b>			

**Class Work is 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.

<b>Section</b>	<b>Suggested Homework Problems</b>
10.1	2,6,7,12,24,25,28,31,37
10.2	4,8,10,14,28,29,36,43,58,59
10.3	8,17,25,29,41,47,54,60,67
10.4	4,6,8,12,24,26,29,35,38
12.1	6,10,13,17,21,25,32,36
12.2	1,4,7,19,24,28,39
12.3	1,2,6,7,10,12,14,20,24,31,38,41,52
12.4	3,9,11,26,31,33,35,39,45
12.5	1,4,11,15,17,20,28,37,50,62,66,71
12.6	2,4,9,15,21-28,31,36,45
14.1	1,6,8,14,15,30,32,45
14.2	3,7,10,15,18,37,40
14.3	4,5,16,24,40,54,66,89,90
14.4	5,13,16,21,24,32
14.5	5,8,16,19,24,33,50,52
14.6	3,6,10,17,24,27,36,38,43,47,59
14.7	2,3,6,17,30,33,41,44,47
14.8	1,5,9,16,23,25,39,40,44
15.1	2,3,6,8,12,17
15.2	3,7,10,14,16,20,25,28,35
15.3	6,9,12,16,26,40,43,47,48,52,55
15.4	2,4,8,10,21,22,31,36
15.6	2,5,9,13,28,32,34
15.7	1,3,5,8,18,19,22,27
15.8	1,3,6,9,18,20,22,27,39