

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

**SYLLABUS  
MATH 201**

Semester: II, 2008-2009 (082)

Coordinator: Dr. Khalid A. AL-Shammari

**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
1	Feb 28 - Mar 04 *	10.1 10.2	Curves Defined by Parametric Equations Calculus with Parametric Curves
2	Mar 07-11	10.3 10.4	Polar Coordinates Areas and Lengths in Polar Coordinates
3	Mar 14-18	12.1 12.2 12.3	Three-Dimensional Coordinate Systems Vectors The Dot Product
4	Mar 21- 25	12.4 12.5	The Cross Product ( <b>End of Exam I Material</b> ) Equations of Lines and Planes
5	Mar 28 – Apr 01	12.6 12.7	Cylinders and Quadric Surfaces Cylindrical and Spherical Coordinates
<b>Major Exam I: Monday, March 30, 2009      Exam I Material: 10.1-12.4</b>			
6	Apr 04-08	12.7 14.1 14.2	Cylindrical and Spherical Coordinates (Contd.) Functions of Several Variables Limits and Continuity
7	Apr 11- 15	14.2 14.3	Limits and Continuity (Contd.) Partial Derivatives
8	Apr 18 - 22	14.4 14.5	Tangent Planes & Linear Approximation The Chain Rule
<b>April 25-29 : Midterm Vacation</b>			
9	May 02-06	14.6 14.7	Directional Derivatives and the Gradient Vector Maximum and Minimum Values
10	May 09-13	14.7 14.8	Max. and Min. Values (Contd.) ( <b>End of Exam II Material</b> ) Lagrange Multipliers
11	May 16-20	15.1 15.2	Double Integrals over Rectangles Iterated Integrals
<b>Major Exam II: Monday, May 11, 2009, Bldg. 54,      Exam II Material: 12.6-14.7</b>			
12	May 23-27	15.2 15.3	Iterated Integrals (Contd.) Double Integrals over General Regions
13	May 30 – Jun 03	15.3 15.4	Double Integrals over General Regions (Contd.) Double Integrals in Polar Coordinates
14	Jun 06-10	15.7 15.8	Triple Integrals Integrals in Cylindrical and Spherical Coordinates
15	Jun 12-15		Review/ Catch up
<b>Final Exam will be Comprehensive. The Registrar Office will announce the schedule of final exam</b>			

\* Thursday, March 05: Normal Wednesday classes