

**King Fahd University of Petroleum and Minerals**  
**Department of Mathematics & Statistics**  
**Syllabus**  
**Semester II, 2011-2012 (112)**  
**Coordinator: Dr. Khairul Saleh**

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**Course #:** Math 201  
**Title:** Calculus III  
**Credit:** 3-0-3  
**Textbook:** Calculus (Early Transcendentals), by James Stewart, 6<sup>th</sup> 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.

**Grading Policy:**

1. **Exam I:** 25% (100 points), **Date:** Wednesday, Feb. 29, 2012. [Common exam.]  
**Material:** 10.1-12.4. **Place:** Building 54, **Time:** 08:30-10:30 PM.
2. **Exam II:** 25% (100 points), **Date:** To be announced later. [Common exam.]  
**Material:** 12.5-14.7.
3. **Class Work:** 15% (60 points). It is based on quizzes, homework and other class activities determined by the class instructor. Any quiz or test under class activity should be of written type, not in the format of MCQ.
4. **Final Exam:** 35% (140 points), [comprehensive common exam.] **Date:** Sunday, May 20, 2012 at 7:00 PM.

**Class Work Average:** The average (x out of 60) of the Class Work of the sections taught by the same instructor should be in the interval [36, 45].

**Missing Exam I or Exam II:** No makeup exam will be given under any circumstance. When a student misses Exam I or Exam II for a legitimate reason (such as medical emergencies), his grade for this exam will be determined based on the Department policy. Further, the student must provide an official excuse within one week of the missed exam.

**Attendance:** Attendance is compulsory. KFUPM policy with respect to attendance will be strictly enforced. Any student accumulating **9 unexcused absences** will be awarded DN Grade in the course.

**Academic Integrity:** All KFUPM policies regarding ethics apply to this course. The students are advised to discuss their grievances/problems with course instructor in a respectful manner.

## Math 201 Syllabus 2011-2012 (112)

Week	Date	Sec.	Topic	Suggested Homework Problems
1	Jan. 28- Feb. 01	10.1 10.2	Curves Defined by Parametric Equations Calculus with Parametric Curves	2,6,7,12,24,25,28,31,37 4,8,10,14,28,29,36,43,58,59
2	Feb. 04-08	10.3 10.4	Polar Coordinates Areas and Lengths in Polar Coordinates	8,17,25,29,41,47,54,60,67 4,6,8,12,24,26,29,35,38
3	Feb. 11-15	12.1 12.2 12.3	Three-Dimensional Coordinate Systems Vectors The Dot Product	6,10,13,17,21,25,32,36 1,4,7,19,24,28,39 1,2,6,7,10,12,14,20,24,31,38,41,52
4	Feb. 18-22	12.3 12.4 12.5	<b>Continued</b> The Cross Product + Exercise 43 p.793 Equations of Lines and Planes	3,9,11,26,31,33,35,39,45 1,4,11,15,17,20,28,37,50,62,66,71
5	Feb. 25-29	12.5 12.6	<b>Continued</b> Cylinders and Quadric Surfaces	2,4,9,15,21-28,31,36,45
<b>Exam I: Wednesday, Feb. 29, 2012; 08:30-10:30PM Material: [10.1 – 12.4]</b>				
6	Mar. 03-07	12.6 14.1 14.2	<b>Continued</b> Functions of Several Variables Limits and Continuity	1,6,8,14,15,30,32,45 3,7,10,15,18,37,40
7	Mar. 10-14	14.2 14.3	<b>Continued</b> Partial Derivatives	4,5,16,24,40,54,66,89,90
8	Mar. 17-21	14.4 14.5	Tangent Planes & Linear Approximation The Chain Rule	5,13,16,21,24,32 5,8,16,19,24,33,50,52
<b>Midterm Vacation: Mar. 24-28, 2012</b>				
9	Mar. 31- Apr. 04	14.6 14.7	Directional Derivatives and Gradient Vector Maximum and Minimum Values	3,6,10,17,24,27,36,38,43,47,59 2,3,6,17,30,33,41,44,47
10	Apr. 07-11	14.7 14.8	<b>Continued</b> Lagrange Multipliers	1,5,9,16,23,25,39,40,44
<b>Exam II: Date: To be announced later; Material: [12.5 – 14.7]</b>				
11	Apr. 14-18	15.1 15.2 15.3	Double Integrals over Rectangles Iterated Integral Double Integrals over General Regions	2,3,6,8,12,17 3,7,10,14,16,20,25,28,35 6,9,12,16,26,40,43,47,48,52,55
12	Apr. 21-25	15.3 15.4	<b>Continued</b> Double Integrals in Polar Coordinates	2,4,8,10,21,22,31,36
13	Apr. 28- May 02	15.6 15.7	Triple Integrals Triple Integrals in Cylindrical Coordinates	2,5,9,13,28,32,34 1,3,5,8,18,19,22,27
14	May. 05-09	15.7 15.8	<b>Continued</b> Triple Integrals in Spherical Coordinates	1,3,6,9,18,20,22,27,39
15	May. 12-16		<b>Review and Catch up</b>	
<b>Final Exam: Sunday, May 20, 2012 at 7:00 PM (Comprehensive Exam)</b>				