



Prince Sultan University
Department of Mathematical Science
 SYLLABUS
 MATH 211 (132)

Mathematics Department Website: www.psu.edu.sa/math

Course : MATH 211

Title : Business Calculus

Textbook: Calculus for Business, Economics, and the Social & life Sciences

By: Laurence D. Hoffmann and Gerald Bradley; 11th Edition.

Week#	Date	Section	Topic
1	January 26 – 30	1.1 1.2	Functions The Graph of a Function
2	February 02 – 06	1.3 1.4	Linear Functions Functional Models
3	February 09 – 13	1.5 1.6	Limits One-Sided Limits and Continuity
4	February 16 – 20	2.1 2.2	The Derivative Techniques of Differentiation
5	February 23 – 23	2.3 2.4	Product and Quotient Rules; Higher-Order Derivatives The Chain Rule
6	March 02 – 06	2.5 2.6	Marginal Analysis & Approximations Using Increments Implicit Differentiation and Related Rates
	First Major Exam: Wed. March 5th, 2014 at 04:00 noon to 5:30 pm from section 1.1 to 2.5		
7	March 09 – 13	3.1 3.2	Increasing and Decreasing Functions; Relative Extrema Concavity and Points of Inflection
8	March 16 – 20	3.3	Curve Sketching
Midterm Vacation			
9	March 30 – April 03	3.4 4.1	Optimization Exponential Functions
10	April 06 – 10	4.2 4.3	Logarithmic Functions Differ. of Logarithmic & Exponential Functions
11	April 13 – 17	5.1 5.2	Anti-differentiation: The Indefinite Integral Integration by Substitution
12	April 20 – 24	5.2 5.3	Integration by Substitution The Definite Integral & The Fundam. Theo. of Calculus
13	April 27 – May 01	5.4 5.5	Area between curves & Average Value Applications for Business and Economics
		Second Major Exam: Wed. April 30, 2013 at 04:00 noon to 5:30 pm from section 2.6 to 5.4	
14	May 04 – 08	6.1 7.1	Integration by Parts Functions of Several Variables
15	May 11 – 15	7.1 7.2	Functions of Several Variables Partial Derivatives
16	May 18 – 19		Final Exam Preparation Period
May 20 – June 05 Final Exam Preparation Period			

Class attendance:

- Students are required to attend all classes starting from the first day of the semester. Attendance will be taken at the start of the lecture. If the student enters the classroom after the attendance was taken and within **5 minutes**, he will be marked **late**. 3 lates will be counted as one absence. If the student enters the classroom **after 5 minutes**, he will be marked **absent**.
- **No excuses for missing classes, including medical reasons, are accepted.** Any excuse, legitimate or not, will be counted against the student's limit for DN (13 Absences).
- “**DN Grade**” will be issued to a student who **misses 13 classes**. This means he cannot enter any more classes or exams. (**1st warning: 5 absences** ; **2nd warning: 9 absences**)
- In case a student **misses** a class, he must contact any one of his classmates to get all information and topics covered of classes he **missed**.
- 5 points will be assigned to the attendance. **One point will be deducted** from the student's total grade for every one absent.

Class work(Quizzes, Online Homework and Class Participation)

- The class work grade is expected to reflect the performance of the student throughout the semester and is based on at least 10 quizzes, class participation, and attendance.
- **Quizzes** will be given at the beginning of some lessons. The quiz covers the materials discussed during the previous lectures you are given along with the syllabus. *(Remember that if you are absent or late for the lesson, then you will get a **zero** for the quiz). (There is no make up for the quizzes).*
- **Class Participation**, behavior, and attitude in the class is also part of your class work assesment.

Exams:

- Two Class Majors will be given during the term. These exams count for 40% of your total grade.
- A Final exam given at the end of the term covering all the subjects taken during the term and is worth 40%.

Math Department Website:

- A student can visit “The Math Department Page” through the Mathematical Sciences Website (www.psu.edu.sa/math) where he can find several helping information such as the syllabi for all math courses, useful links to help the student in his study, and a huge collection of the previous majors and final exams that were administered by the Department through the previous semesters.

Calculators:

Only Scientific Calculators are allowed in this course. (No Graphing Calculators)

Office Hours:

Check the table posted on your instructor's door for the office hours incase you need assistance or you need to inquire about matters concerning your marks, absence, and so on.

Grading Policy:

Two Majors: 40%; Quizzes & Homeworks: 10% ; Attendance 5%; Participation 5%; Final : 40%

Tips on how to enhance your problem-solving abilities:

- Attend all classes.
- Do all the homework assignments on time. It is impossible to really understand math without solving problems.
- You are urged to practice (but not memorize) more problems than the ones assigned.
- You should always try to solve a problem on your own before reading the solution or asking for help.
- If you find it difficult to handle a certain type of problems, you should try more problems of that type.
- You are encouraged to solve some of the review problems at the end of each chapter.
- The practice you get doing homework and reviewing the class lectures will make exam problems easier and quicker to solve.
- Make good use of the office hours of your instructor.

Suggested Problems to solve

SECTION	PAGE	PROBLEMS
1.1	12	14, 22, 23, 24, 31, 32, 35, 37, 46, 48, 57, 58, 59, 63, 79, 80, 81
1.2	26	16, 19, 22, 24, 27, 31, 34, 39, 45
1.3	40	6, 19, 20, 28, 29, 31, 33, 35, 37, 39
1.4	56	16, 18, 31, 33, 34, 35
1.5	74	19, 21, 23, 25, 28, 31, 34, 36, 37, 38, 52, 53, 54
1.6	87	15, 20, 25, 27, 35, 39, 42, 56, 57
Review	92	1, 2, 9, 10, 12, 14, 16, 17, 19, 21, 23, 25, 33, 34, 35, 36, 37, 58
2.1	114	5, 7, 19, 21, 40, 43, 44, 45
2.2	128	24, 26, 27, 31, 33, 38, 39, 45, 46, 49, 50, 51
2.3	142	13, 18, 22, 23, 25, 26, 31, 37, 39, 43, 45, 49, 52, 68, 69
2.4	156	20, 26, 33, 36, 38, 45, 46, 50, 51, 60, 61, 63, 65, 66, 69, 70
2.5	168	3, 4, 5, 12, 13
2.6	181	8, 13, 14, 16, 21, 24, 28, 30, 31, 35, 38, 39, 41, 42, 44
Review	186	4, 12, 13, 17, 23, 26, 29, 31, 33, 55
3.1	209	3, 4, 12, 16, 21, 24, 26, 28, 32, 35, 37, 39, 42, 45, 47, 53, 54, 55, 57, 69
3.2	228	6, 9, 10, 14, 19, 23, 28, 29, 30, 34, 43, 58
3.3	243	9, 13, 15, 22, 27, 29, 31, 49
3.4	261	3, 5, 9, 16, 17, 23, 25, 27, 29, 45
Review	287	3, 5, 6, 14, 23, 25, 41
4.1	309	18, 27, 35, 37, 43, 45, 54
4.2	325	20, 31, 42, 43, 44, 45, 48, 52, 55
4.3	340	26, 29, 34, 45, 49, 51, 53, 54, 59, 60, 61, 62, 64, 65
Review	364	5, 18, 20, 23, 25, 29, 30, 43, 46, 57, 58, 60
5.1	388	16, 19, 20, 27, 29, 41, 42, 47, 48, 49, 53
5.2	403	3, 14, 27, 29, 35, 36, 40, 42, 46, 57, 58
5.3	419	32, 35, 37, 39, 40, 42, 44, 53, 55, 58
5.4	437	1, 2, 3, 4, 6, 7, 11, 13, 19, 20, 22, 24, 35, 45, 62, 63
Review	469	9, 10, 16, 18, 19, 20, 29, 30, 31, 39
6.1	490	2, 4, 12, 14, 15, 17, 18, 19, 20, 22, 23, 24, 46
7.1	556	17, 18, 19, 20, 21, 22, 34
7.2	571	5, 15, 19, 22, 24, 27, 30, 31