Calculus for Business

S Y L L A B U S

Summer 2011

Course Number: **MAC 2233-P80B** Course Title: **Calculus for Business**
Classroom: **BPC 111** Office Location: **BPC 217**
Course Instructor: **Dr. Zadegan** Class Time: **Tu,Th: 6:25-9:05 p.m.**
Office Hours: **Tu,Th: 6:00-6:30 p.m.** E-mail: zadegan@fiu.edu

Texts: **Calculus for Business, Economics, and the social, and life sciences, 10/ed,** by Hoffmann and Bradley, McGraw Hill Publishing.

Topics to be covered:

- Functions and their graphs with applications in business,
- Limits and continuity with applications in business,
- Differentiations and their applications in business,
- Exponential and Logarithmic functions with applications in business,
- Integrals with applications in business,
- Functions of two variables with applications in business.

Math Lab (Learning Center): Students who have difficulty completing homework assignments and/or score below 60% on exams must attend the learning center (ACI-160) to study with the tutors. The complete solutions to the exercises are posted on the Internet at (w3.fiu.edu/math). Do not try to memorize the solutions to the exercises. Students may need to do the exercises several times.

Goal: Learn Calculus for business.

Course Outcome: By the end of the semester students should be able

- to find limits of functions,
- to verify continuity of functions,
- to find derivatives of single variable functions,
- to solve applications of derivatives in business,
- to find partial derivatives of multivariable functions,
- to apply partial derivatives to business and economics problems,
- to find integral of some basic functions,
- to find integral of exponential and logarithmic functions,
- to apply integrals to solve business and economics problems.

Academic Misconduct:

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Expectations:

Students must come to class on time with a textbook, notebook, a simple scientific non-graphical calculator, and pencil. Beepers and telephones must be turned off in the classroom. In addition, students must follow all the school rules delineated in the student handbook. Students must be present at each assigned exam day. If a student has to miss an exam for some valid reason, he/she must let the instructor know so that the instructor can replace the grade with half of the score of his/her final exam (final counts as two tests). In other words, **there is no make-up exam**.

In addition, students are expected at least do six hours of homework each week. If you expect to pass the class, you must meet these six hours of commitment. If you failed this class already in the past, my suggestion is that you take college algebra instead of this class. You will need superior skills in college algebra in order to pass this course.

Course Evaluation and Activities:

1. Three Tests (**absolutely no make-ups**)
2. One Comprehensive Final Exam (**absolutely no make-up**)

Percent Points for Grading:

1. 3 Tests ----------60%,
2. Final Exam----------40%.

Incomplete Grade Policy:

In order for a student to receive a grade of incomplete, the following two conditions must be met:

1) The student must be passing the course with a grade of "C" or better up to the final exam.

2) The student must have a serious and valid reason for missing the final exam.

If the student is already failing the course before the final, and he/she misses the final, then the student will fail the course.

Check Your Grade:

ITEMS	POSSIBLE POINTS	YOUR SCORE IS	YOUR AVERAGE IS BETWEEN	YOUR GRADE IS
Test # 1 on July 7	100	_____	90-100	A
			87-89	A-
Test # 2 on July 21	100	_____	84-86	B+
			80-83	B
Test # 3 on Aug. 4	100	_____	77-79	B-
			74-76	C+
Final on Aug. 11 Comprehensive	200	_____	70-73	C
			64-69	D+
Total	**500**	_____	60-63	D
			56-59	D-
Average = Total/5			<55	F

Note: There is no **C-** grade, and we will not drop any tests.

Exam Policy at the Time of the Test: Bring a picture ID (Driver's License) to the test. All water bottles, phones, purses, book bags, headgear, and any other personal items must be put away. Everything except the test, a pencil, and a non graphical calculator must be removed from the desk. All cell phones must be turned off before entering the classroom, and turned on after leaving the classroom. Anyone who leaves during the test is not allowed to return to the test. If a student leaves the room during the test for any reason, he/she forfeits his/her right to turn in the test.

Outline of Activities for MAC 2233

Days	Chapter	Sections & Topics	Pages	Ex. #
6/ 28	1 2	1.5 Limits 1.6 One-sided Limits 2.1 Derivative	74-76 87-89 112-113	19-36, 53-58 12-28, 38-51 10-32, 46-54
6/30	2	2.2 Techniques of differentiation 2.3 Product and quotient rules: Higher derivatives	125-127 138-141	18-34, 51-59 12-26, 48-62
7/5	2	2.4 Chain rule 2.5 Marginal analysis and approximations **Review**	152-155 163-165	13-42, 65-76 1-25
7/7	3	**Test # 1 Tuesday July 7th Ten questions** 3.1 Increasing & decreasing functions	204-207	15-44, 53-66
7/12	3	3.2 Concavity & points of inflection 3.3 Curve sketching 3.4 Optimization	220-223 220-223 236-238	5-38, 53-61 6-38, 53-62 17-32, 45-49
7/14	4	4.1 Exponential functions 4.2 Logarithmic functions 4.3 Differentiation of log & exponential functions	304-306 321-323 336-339	35-63 43-66 6-38, 65-77
7/19	4	4.4 Exponential models **Review**	350-353	5-26, 31-34
7/21	5	**Test # 2 Tuesday July 21st Ten questions** 5.1 Anti-derivatives (Integration)	381-383	13-50
7/26	5 5	5.2 Integration by substitution 5.3 Definite Integrals & fundamental theorem of Calculus	394-396 410-413	3-36, 51-55 1-46
7/28	5	5.4 Applications of definite integrals to find areas 5.5 Applications of integrals to Business problems	428-430 442-443	5-24, 29-57 1-32
8/2	7	7.1 Functions of several variables 7.2 Partial derivatives 7.3 Optimizing functions of two variables	568-569 583-585 596-598	1-34 8-20, 45-51 5-24, 27-33
8/4		**Test # 3 Tuesday August 2th Ten questions** **Review**		
8/9		**Review**		
8/11		**Comprehensive Final Exam: August 11th Twenty questions**		