Calculus for the Management, Life, and Social Sciences
Summer 2012
MATH 151.92 (4 credits), Tu_Th, 5:00PM-8:00PM, Wickersham 219

Prerequisites: Mathematics placement or a grade of C– (C-minus) or better in MATH 101 *College Algebra* is the prerequisite for this course.

Instructor: Dr. Buchanan
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Office Hours: 4:00PM-5:00PM (Tu & Th) or by appointment
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Course URL: http://banach.millersville.edu/~bob/math151/

Textbook: *Essential Calculus with Applications*, 2nd edition, D. Franklin Wright, Spencer P. Hurd, Bill D. New Hawkes Learning Systems, Charleston, SC (2008) ISBN: 978-0-918091-95-6.

Objectives: MATH 151 is an introductory calculus course requiring a background in college algebra. Students will use their skills in elementary algebra together with a graphing calculator (The Department of Mathematics recommends a TI-83 or TI-84. The TI models 89 and 92 may **not** be used on graded assignments.). Throughout this course and semester the instructor plans:

- to introduce the Cartesian (two-dimensional, rectangular) plane and methods for determining distance between points, determining slopes of lines, and drawing graphs of equations and functions,

- to explore graphical, numerical, and algebraic methods for evaluating limits of functions,

- to introduce the process of differentiation and the concept of the derivative, together with applications of the derivative to problems involving the business, economics, the life and social sciences,

- to introduce the exponential and logarithmic functions, their properties, and apply them to problems from the arenas of business, finance, and the life sciences,

- to introduce the processes of anti-differentiation and integration, the concepts of the indefinite and definite integral, and techniques for evaluating integrals, and

- to apply the definite integral to problems drawn from the fields of business, economics, ad the social sciences.

Course Contents: The sections of the textbook to be covered this semester will include:

Chapter 1: Functions, Models, and Graphs

Chapter 2: Limits, Slopes, and the Derivative

Chapter 3: Algebraic Differentiation Rules

Chapter 4: Applications of the Derivative

Chapter 5: Exponential and Logarithmic Functions

Chapter 6: Integration with Applications

Chapter 7: Techniques of Integration

The following tentative schedule lists the textbook sections expected to be covered on the given dates (the dates are in parentheses). Adjustments may be made to the schedule to accomodate the pace of learning of the students.

Tuesday	Thursday
(05/15) 1.1–1.4	(05/17) 1.5–1.8
(05/22) 2.1, 2.2	(05/24) 2.3–2.5
(05/29) 3.1, 3.2	(05/31) Review, **Test 1**
(06/05) 3.3, 3.4	(06/07) 3.5, 4.1
(06/12) 4.2–4.4	(06/14) 4.5, 4.6
(06/19) 5.1–5.3	(06/21) Review, **Test 2**
(06/26) 5.4, 5.5	(06/28) 6.1, 6.2
(07/03) 6.3, 6.4	(07/05) 6.5, 6.6
(07/10) 7.1, 7.2	(07/12) **Final Exam**

Attendance: Students are expected to attend all class meetings. If you must be absent from class on the day an assignment is due, you must complete and hand in the assignment prior to the absence. If you know you will be absent on the day of a test, you must notify me before the time the test is scheduled in order to schedule a make-up test. Students who miss a test should provide a valid excuse, otherwise you will not be allowed to make up the test. No final exam exemptions.

Homework: Students are expected to do their homework and participate in class. Students should expect to spend a minimum of three hours outside of class on homework and review for every hour spent in class. Homework problems from the textbook will be assigned nearly every class meeting. You should work all of these problems neatly and keep them organized for use when studying for tests and the final examination since the test and exam problems will be similar in wording and difficulty to the exercises in the textbook. The homework will be submitted through the on-line homework system known as *Hawkes Learning Systems*. To accompany each section of the textbook we cover, I will assign a small number of exercises which you will find on-line, solve, and submit your answers on-line. Treat the exercises from the textbook as a self-check for your understanding of the concepts before attempting the on-line exercises.

Tests: There will be two 90-minute in-class tests and a 2-hour comprehensive final examination. The tests are tentatively scheduled for

- Thursday, May 31, 2012

- Thursday, June 21, 2012

Missed tests must be made up as soon as possible, preferably within one week of the originally scheduled test date.

The comprehensive final examination is scheduled for Thursday, July 12, 2012.

Grades: Course grade will be calculated as follows.

Test 1	20%
Test 2	20%
Exam	20%
Classwork	15%
Homework	25%

Tests and the final examination will be graded individually on a 100-point scale. Graded homework assignments may consist of a variable number of problems worth ten points each. I keep a record of students' test, homework, and exam scores. Students should also keep a record of graded assignments, tests, and other materials. The course letter grades will be calculated as follows. I will not "curve" course grades.

90-92	A−	93-100	A		
80-82	B−	83-86	B	87-89	B+
70-72	C−	73-76	C	77-79	C+
60-62	D−	63-66	D	67-69	D+
		0-59	F		

Course Repeat Policy An undergraduate student may not take an undergraduate course of record more than three times. A course of record is defined as a course in which a student receives a grade of A, B, C, D, (including + and −) F, U, Z or W. The academic department offering a course may drop a student from a course if the student attempts to take a course more than three times.[1]

The last day to withdraw from a course (and receive the W grade) is June 22, 2012.

Inclement Weather Policy: If we should miss a class day due to a school closing because of weather, any activities planned for that missed day will take place the next time the class meets. For example, if a test is scheduled for a day that class is canceled on account of snow, the test will be given the next time the class meets.

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[1]Memorandum to mathematics faculty from Dr. Charles G. Denlinger, Assistant Chair, Department of Mathematics, August 30, 2004.