

MATH 0120 Business Calculus
Spring Term 2009 (2094)

INSTRUCTOR	Elayne Arrington, PhD Office: 608 Thackeray Hall Office Hours: MWF 2:00 – 3:30 (or by appointment) Telephone: 412-624-8337 or 8375 (Math Office) fax: 412-624-8397 e-mail: earr@pitt.edu http://www.math.pitt.edu/~earr
TEACHING ASSISTANTS	emell@pitt.edu
TEXTBOOK	<i>Brief Applied Calculus, Fourth Edition</i> , by Geoffrey C. Berresford and Andrew M. Rockett; Houghton Mifflin Company, 2007.
COURSE PREREQUISITES	Math 0031 (College Algebra) or equivalent, Math 0100 (Preparation for Business Calculus), or an appropriate score on the mathematics placement test.
COURSE DESCRIPTION	This course is designed for students in business, economics, and other social sciences. It introduces the basic concept of limit and its application to continuity, differentiation, integration, maximization, minimization and partial derivatives. Applications to the social sciences, especially business and economics, are stressed. The calculus of trigonometric functions is not covered.
COURSE GOALS	The course will provide students with the opportunity to: <ul style="list-style-type: none"> <input type="checkbox"/> Learn the elements of business calculus in an environment that recognizes the diverse population of the course and the University. <input type="checkbox"/> Explore mathematical concepts in more depth by collaboration in small diverse groups. <input type="checkbox"/> Improve communication skills by speaking and writing about mathematics in small groups.
LEARNING OUTCOMES	Students of the course will be able to: <ul style="list-style-type: none"> <input type="checkbox"/> Find limits of functions presented as graphs, tables, or algebraic expressions. <input type="checkbox"/> Use the concept of limit to define the derivative of a function. <input type="checkbox"/> Differentiate functions involving powers, exponentials, and logarithms. <input type="checkbox"/> Apply the concepts of differentiation to solve optimization problems. <input type="checkbox"/> Use the derivative to hand sketch the graphs of functions involving powers, exponentials, and logarithms. <input type="checkbox"/> Find indefinite integrals of functions involving powers, exponentials, and logarithms. <input type="checkbox"/> Find definite integrals of appropriate functions. <input type="checkbox"/> Apply the definite integral to solve problems. <input type="checkbox"/> Find partial derivatives of functions of two variables. <input type="checkbox"/> Apply the method of Lagrange multipliers to solve constrained optimization problems.
COURSE	The course consists of lecture and recitation components. Each student must

ORGANIZATION	register for a recitation that is associated with the lecture that he or she is attending. Lectures are M, W, F. Recitations are scheduled on W and F of each week. The Wednesday recitation will be a collaborative one in which students work in small diverse groups to complete worksheets. These worksheets will cover problems similar to the practice problems, but in more depth. Students will assemble individually in the Friday recitation. A quiz will be given in the Friday recitation almost every week of the term. Students should read each section before the lecture on that section.												
CALCULATOR POLICY	A graphing calculator such as a TI-83 or above will be useful in doing many of the practice problems and visualizing solutions, but only fully written solutions showing all work will receive full credit. Because of the nature of the tested material, <u>calculators will not be permitted on the 50-minute examinations or on the Departmental Final Examination.</u>												
MAKE-UP POLICY	There will be no make-up* for exams, worksheets, or quizzes. *The instructor will make arrangements with affected students when an examination or quiz is scheduled on a religious holiday or a date on which the student must represent the University. There is no make-up for worksheets.												
FINAL EXAMINATION POLICY	The one-letter-grade rule applies: A student's course grade in Math 0120 will not exceed her/his grade on the Math 0120 Departmental Final Examination by more than one letter grade.												
GRADING POLICY	The student's course grade will be based solely on her/his performance on the worksheets, the quizzes, and the examinations as follows: <table data-bbox="721 1408 1804 1702"> <tr> <td><input type="checkbox"/> Worksheets</td> <td>10%</td> </tr> <tr> <td><input type="checkbox"/> Quizzes</td> <td>15%</td> </tr> <tr> <td><input type="checkbox"/> Exam #1</td> <td>15%</td> </tr> <tr> <td><input type="checkbox"/> Exam #2</td> <td>15%</td> </tr> <tr> <td><input type="checkbox"/> Exam #3</td> <td>15%</td> </tr> <tr> <td><input type="checkbox"/> Departmental Final Exam</td> <td>30%</td> </tr> </table>	<input type="checkbox"/> Worksheets	10%	<input type="checkbox"/> Quizzes	15%	<input type="checkbox"/> Exam #1	15%	<input type="checkbox"/> Exam #2	15%	<input type="checkbox"/> Exam #3	15%	<input type="checkbox"/> Departmental Final Exam	30%
<input type="checkbox"/> Worksheets	10%												
<input type="checkbox"/> Quizzes	15%												
<input type="checkbox"/> Exam #1	15%												
<input type="checkbox"/> Exam #2	15%												
<input type="checkbox"/> Exam #3	15%												
<input type="checkbox"/> Departmental Final Exam	30%												
STUDENTS WITH DISABILITIES	A student with a disability for which he or she is requesting an accommodation, should contact both the instructor and the Office of Disability Resources and Services, 216 William Pitt Union (412) 648-7890 as early in the term as possible.												
ACADEMIC INTEGRITY	Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity will incur a minimum sanction of a zero score for the quiz, exam or paper in question. Additional sanctions may be imposed, depending on the severity of the infraction. Students may work together or use library resources to do homework, but each student must write his or her own solutions independently. Copying solutions from other students will be considered cheating, and handled accordingly.												
CLASSROOM CONDUCT	All students are expected to report to class on time, refrain from individual conversation during class, turn cell phones and pagers off or to "vibrate", and show respect for fellow students and faculty.												
DEADLINES	Add/drop: Friday, January 16. Monitored withdrawal: Friday, March 6.												

MATH 0120 Business Calculus
Class Schedule

Spring Term 2009 (2094)

Monday (Lecture)	Wednesday (Collaborative Recitation)	Wednesday (Lecture)	Friday (Recitation)	Friday (Lecture)
Jan. 5 Sec. 1.1	Jan. 6	Jan. 7 Sec. 1.2	Jan. 8	Jan. 9 Sec. 1.3
Jan. 12 Sec. 1.4	Jan. 13 Worksheet #1	Jan. 14 Sec. 2.1	Jan. 15 Quiz #1	Jan. 16 Sec. 2.2
Jan. 19 Holiday, No Class	Jan. 20 Worksheet #2	Jan. 21 Sec. 2.3	Jan. 22 Quiz #2	Jan. 23 Sec. 2.4
Jan. 26 Sec. 2.5	Jan. 27 Worksheet #3	Jan. 28 Sec. 2.6	Jan. 29 Quiz #3	Jan. 30 Sec. 2.7
Feb. 2 Sec. 3.1	Feb. 3 Worksheet #4	Feb. 4 Review	Feb. 5 Quiz #4	Feb. 6 EXAM #1
Feb. 9 Sec. 3.2	Feb. 10 Worksheet #5	Feb. 11 Sec. 3.3	Feb. 12 Quiz #5	Feb. 13 Sec. 3.4
Feb. 16 Sec. 3.5	Feb. 17 Worksheet #6	Feb. 18 Sec. 3.6	Feb. 19 Quiz #6	Feb. 20 Sec. 4.1
Feb. 23 Sec. 4.2	Feb. 24 Worksheet #7	Feb. 25 Sec. 4.3	Feb. 26 Quiz #7	Feb. 27 Sec. 4.4
Mar. 2 Sec. 5.1	Mar. 3 Worksheet #8	Mar. 4 Review	Mar. 5 Quiz #8	Mar. 6 EXAM #2
Mar. 9 Spring Recess	Mar. 10 Spring Recess	Mar. 11 Spring Recess	Mar. 12 Spring Recess	Mar. 13 Spring Recess
Mar. 16 Sec. 5.2	Mar. 17 Worksheet #9	Mar. 18 Sec. 5.3	Mar. 19 Quiz #9	Mar. 20 Sec. 5.4
Mar. 23 Sec. 5.5	Mar. 24 Worksheet # 10	Mar. 25 Sec. 5.6	Mar. 26 Quiz #10	Mar. 27 Sec. 6.1
Mar. 30 Sec. 6.2	Mar. 31 Worksheet #11	Apr. 1 Sec. 7.1	Apr. 2 Quiz #11	Apr. 3 Sec. 7.2
Apr. 6 Review	Apr. 7 Worksheet #12	Apr. 8 EXAM #3	Apr. 9 Quiz #12	Apr. 10 Sec. 7.3
Apr. 13 Sec. 7.5	Apr. 14 Review	Apr. 15 Review	Apr. 16 Review	Apr. 17 Review

Final Examination: Wednesday, April 22: 12:00 – 1:50 p.m.