Business Calculus

Course Description
This is a non-traditional math course with applications in business. It involves a group project, oral presentation, and written report, using Excel to solve math problems, and the use of Power Point and the equation editor in Word. In this class, we develop the fundamentals of calculus and optimization using technology. This includes Demand, Revenue, Cost, and Profit; Differentiation; Integration; Graphing Functions; Trend Lines; Using Solver; Distributions; Variance; The Sample Mean; ; Normal Distributions; and Simulating Normal Random Variables.

Learning Objectives
After completion the course, students should be able to
1. Graph functions using excel.
2. Use Trend Lines to fit data.
3. Apply Demand, Revenue, Cost, and Profit concepts to real life situations.
4. Understand Differentiation and apply it to real life problems.
5. Use Solver via Excel to solve optimization problems.
6. Understand Integration and apply it to real life problems.
7. Understand and use Distributions of Finite and Continuous Random Variables and Random Sampling.
8. Understand and use the concept of Variance.
9. Compute and graph the Sample Mean for different random samples.
10. Understand and use Normal Distributions (Standard, General) for a variety of random variables.
11. Simulate Normal random Variables
12. The learner will strengthen his or her general academic skills (critical thinking, writing, verbal explanation, working collaboratively, assuming responsibility, and use of technology).
13. The learner will develop a broad base of business mathematics knowledge: Concepts, Basic skills, mathematical senses (quantitative, geometric, symbolic), and thinking process (problem solving, predicting, and generalizing).

Major Course Requirements
Successful completion of College Algebra (Math 1314) and Business Mathematics (Math 1324) or suitable placements are pre-requisites for this course. The following assessments will be given during the semester: two examinations (20% each), final exam (30%), team project (10%), differentiation and integration mastery assessments (10%) and several team homework (10%). Each team will give both preliminary and final reports on the project (Marketing Computer Drives). Final report will be presented in both written and oral forms and should include a word file, an Excel file, and a PPT file. All formats will be announced in class and posted on class webpage.

Required or Recommended Readings
The E-text “Mathematics for Business Decisions Part 2: Calculus and Optimization”, Release 1.0, 2003, by Thompson and Lamoureux, Mathematical Association of America can be accessed through the university main server. The ID and password will provided to students on the first day of class. Each team needs to have a flash drive for projects and homework. Students need to consult the class web page: http://falcon.tamucc.edu/~mabudiab/Spring2012/math1325/index.htm regularly.
Course Policies

- Course grade will be based upon the percentage of the total possible points that a student earns and the following grading scale: A: >90% of total points, B: >80% of total points, C: >70% of total points, D: >60% of total points.
- The class web page will include a list of topics that will be studied during each class meeting. The e-text contains exercises which should be worked out while studying the material.
- Attendance is mandatory. Attendance will be checked each class period.
- I am available during regular office hours or through special arrangement.
- Each student is expected to take notes during lectures, and keep a record of his/her assignments, tests and over all grades.
- Campus will be closed during spring break, which is **March 11-15, 2013**.
- Last day of class is **May 7th, 2013**.

Academic Integrity/Plagiarism.
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in failing the course.

Dropping a Class

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. **(April 12th, 2013)** is the last day to drop a class with an automatic grade of “W” this term.

Preferred methods of scholarly citations

Classroom/professional behavior

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

Grade Appeals

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the
University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**Disabilities Accommodations**
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Tentative Course Outline**
To be provided first day of class.