Texas A&M University-Corpus Christi
Department of Mathematics and Statistics
MATH 1325.01  Business Calculus
Summer I, 2012 ( 6/4 ~ 7/6/ 2012)

I. Course Information:
Instructor: Dr. Ping-Jung “Charlene” Tintera
Office: CI-368
Phone: 825-3483
Class meeting: MTWR 10 –11:50 am CI-122
Office hours: MTWR 9 ~ 10 am
Email: ptintera@tamucc.edu
Final Exam: 7/06/ 2012 during class

II. Course description:
This is a non-traditional math course with applications in business. It involves group projects, oral presentations, and written reports, using Excel to solve math problems, and the use of Power Point and the equation editor in Word. We will develop the fundamentals of business calculus and optimization using technology. This includes Graphing Functions, Trend Lines, Demand, Revenue, Cost, and Profit, Differentiation (Rate of Change) and its applications, Using Solver, Integration (Area under the Curve) and its application, Normal Distributions, Marketing Analysis, Distributions in General, Variance, The Sample Mean, Normal Distributions, Simulating Normal Random Variables, and Hospital Administration.

III. PREREQUISITES FOR THE COURSE:
Math 1324 Business Mathematics or placement into Math 1325.

IV. TEXT AND OTHER SUPPLIES REQUIRED:

V. STUDENT LEARNING OUTCOMES:
This course is designed to enable students to understand and work comfortably with:
- Problem solving skills by using Excel spreadsheets and analyzing graphs,
- Conceptual understanding of mathematics in business fields,
- Using technology in industrial and business,
- Combining technology and mathematics terms in business world.

VI. Instructional methods and activities:
Methods and activities for instruction include:
- Instructional presentation of new material and concepts,
• Class discussion and problem solving analysis using critical thinking techniques,
• Individual written assignments to enhance understanding of new concepts,
• Discovery method techniques supported by a graphing utility to view the effects of shifting and translation concepts on the functions,
• Optional 1-to-1 discussion time between students and instructor during office hours.

VII. Evaluation and grading policies:

Attendance  MANDATORY
Tests  75% (Take top 3 test scores out of 4 tests; 25% each)
       project grades could be added as bonus point
Final exam  25% (comprehensive)
Grading scale:  
   A: 90 – 100,  B: 80 – 89.5,  C: 70 – 79.5,  D: 60 – 69.5,  F: 59 and below
** round up from 0.5

VIII. Class policies:

• Attendance is mandatory. Attendance will be checked each class period and each absence after 3 times (4th and 5th) will result in one letter grade lower (6th absence will result in two-letter-grade lower). Please save absences for emergencies.
• Homework will be given each class period and discussed at the beginning of next class period.
• Cell phone using is prohibited in any circumstances.
• Cheating is strongly prohibited. If I caught someone cheating during any test, students may drop the class without my permission. If not, normally it is an “F” for the semester grade.
• You are the only person responsible to drop the class and responsible to stay inform for any changes for tests and room changes. All the changes will be announced in the class.
• You may email me for help any time but not the night before the scheduled test neither the possible chance to postpone the test.
• I respect your request by email and I will answer it in my best convenient time.
• Makeup test will be given once per student with appropriate documentation provided. Please save the opportunity for the emergencies.
• There is no makeup final exam. It will be an “F” for the semester grade regardless.
• Help: Tutoring and Learning Center has many quality tutors to help you while you need someone beside my office hours. Welcome to visit those tutors at the second floor of library. Please find out their schedule first before you make a plan to go for this semester. I will be happy to work with you anytime during my office hours and also email me for your special needs. Good luck to everyone in the class.
• This syllabus is a contract between students and the instructor. If you have no any question regarding to this class, this syllabus will be activated from now and through this semester.

IX. Tentative schedule:

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<tr>
<th>Week 1</th>
<th>Work/Assignment</th>
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<td>SUMMER 2012</td>
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Visit the course web page and look at the syllabus and other materials for the class.

• Form Teams.
• Open MBD part 2.ppt from the folder Course Files in your e-text. Read Introduction Course (slides 31-37) and Project1: Marketing Computer Drives (slides 49-58). Get acquainted with your Team.
• Obtain the data for your team from class web page.
• Begin working on Preliminary reports which will be presented on next class meeting. Prepare at least 5 slides; follow guidelines discussed in class.
• Download and begin working on Team-Homework #1.
• Read and study Graphing Functions (MBD 2 Proj1.ppt, slides 2-20).
• Download and begin working on Team-Homework #2. Hand in a word document with the cover sheet and with all work shown, as explained in class. **Only team members contributing equally to each problem may sign the cover sheet.**
• Read and study Trend Lines (slides 21-34).
• Continue working on your Preliminary Report. Make a copy of your slides to hand in to me before your presentation next class meeting.

**Week 2 Work/Assignment**

• Preliminary report and Homework #1 are due today.
• Read and study MBD Proj.1.ppt: (Demand and Revenue, Cost and Profit): Income (slides 35-40).
• Read and study MBD Proj.1.ppt: (Demand and Revenue, Cost and Profit): Expenses and Profit (slides 41-51).
• Read and study MBD Proj.1.ppt: (Demand, Revenue, Cost, and Profit): Focus on the Project (slides 52-63).
• Start working on Homework # 3 and # 4.
• Read and study MBD project 1: Differentiation I (slides 64-78) and Differentiation II (slides 79-99).

**Week 3 Work/Assignment**

• Study MBD project 1: Differentiation III (slides 100-105) and Focus on the Project (slides 106-113) and Using Solver (slides 114-129), Focus on the Project (slides 130-135), and Differentiation (slides 36-105).
• Start working on Homework 5.
• Read MBD Project 1: Integration I (slides 136-155) and MBD Project 1: Integration II (slides 156-172). PRESENTATION AND TEST 2.
• Study Integration III (slides 173-198) and Integration (slides 136-198).
• Answer questions 0-9 for your project [http://falcon.tamucc.edu/~maa0176/spring07/math1325/qfp1.doc](http://falcon.tamucc.edu/~maa0176/spring07/math1325/qfp1.doc)
• Midterm AND start Project 2: Bidding on an Oil Lease (MBD part 2, slides #59-67)
• Study Distribution I: Finite Random Variables (MBD 2 Project 2: slides # 2-14) and Distribution II: Continuous Random variables (MBD 2 Project 2: slides # 15-45). Start working on Homework # 6.

**Week 4 Work/Assignment**

• Read and study Distribution III: Random Samples (MBD 2 Project 2: slides # 46-57).
• Supplement 2: Histogram.
• Study Focus on the Project: Bidding on an Oil Lease (MBD 2 Project 2: slides # 58-65).
• Study Variance I: Dispersion (MBD 2 Project 2: slides # 66-84) AND TEST 3.
• Study Variance II: Samples (MBD 2 Project 2: slides # 85-93) and study Focus on the Project: Bidding on an Oil Lease (MBD 2) slides 94-96. And The Sample Mean (MBD 2 Project 2: slides # 97-106).
• Study *The Sample Mean* (MBD 2 Project 2: slides # 107-111) AND *The Sample Mean* (MBD 2 Project 2: slides # 112-118) and working on Homework # 7.

• Study *The Sample Mean and Standard Normal Distribution* (MBD 2 Project 2: slides # 119-208) and General *Normal Distributions* (MBD 2 Project 2: slides # 132-158), presentation, and final exam.

**Week 5 Work/Assignment**

• Study and prepare the final exam.
• Makeup the missed tests.

*Notice to Students with Disabilities*: Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Driftwood 101, at 825-5816. If you need disability accommodations in this class, please see me as soon as possible.

**Grade Appeal Process.** 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](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.

**About the Family Educational Rights and Privacy Act (FERPA)**
Under FERPA, a student has the right to:

1. **Inspect and review their education records**
   Students can inspect and review their education records within 45 days of the day the University receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. **Request to amend their education records**
   Students can request to amend any of their education records that they believe are inaccurate, misleading, or otherwise in violation of the student’s privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student’s right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. **Some control over the disclosure of their education records**
   Students have the right to provide written consent before the University discloses personally
identifiable information from their education records, except to the extent that FERPA authorizes disclosure without consent. The University discloses education records without a student’s prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is

- A person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff)
- A person or company with whom the University has contracted as its agent to provide a service instead of using University employees or officials (such as an attorney, auditor, or collection agent)
- A person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.
- A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University.

Upon request, the University also discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. **File a complaint if they feel any of these rights have been violated**

Students can file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901