A. COURSE INFORMATION

Course number/section: MATH-1325.001
Class meeting time: MTWR 8:00 am-9:53 am
Class location: IH-158
Course Website: https://bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Dr. Baohua Chen
Office location: CI-306
Office hours: MW 12:00 pm-2:30 pm
Telephone: (361) 825-0619 (office)
E-mail: Baohua.chen@tamucc.edu
Appointments: Email to make appointments outside of office hours

C. COURSE DESCRIPTION

Catalog Course Description
Students will develop and combine the concepts in and relationships between Mathematics and Business from the fundamentals of calculus and optimization in all Business fields. Students are expected to learn the materials algebraically with technology. Students will combine the concepts of limits, continuation, and differentiation and integration techniques to solve problems in business, economics, and social sciences.

Extended Course Description
This class is intended to develop the fundamentals of calculus and optimization using technology. The topics to discuss include 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 applications, Normal Distributions, Simulating Normal Random Variables, Hospital Administration.

D. PREREQUISITES AND COREQUISITES

Prerequisites
Math 1324 Business Mathematics or placement into Math 1325.

Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
College Mathematics for Business, Economics, Life Sciences, and Social Sciences, 13th Edition by Barnett. You can read e-book by buying a MyLabsPlus access code instead of buying a book, but access to the e-nook will be expired at the end of the semester.

Software
MyLabsPlus access will need to purchase an access code, either through the campus bookstore or directly from the publisher, Pearson.
Supplies
A calculator is required for every quiz and examination. A T1-83/84 calculator or similar is recommended but not required. NO TI-INSPIRE will be allowed for exams.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:
1. Apply calculus to solve business, economics, and social sciences problems.
2. Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
3. Solve application problems involving implicit differentiation and related rates.
4. Solve optimization problems with emphasis on business and social sciences applications.
5. Determine appropriate technique(s) of integration.
6. Integrate functions using the method of integration by parts or substitution, as appropriate.
7. Solve business, economics, and social sciences applications problems using integration techniques.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

- 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;
- Use of MyLabsPlus which includes electronic copy of the book, videos, examples, and study hints.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Final course standing will be based upon several Homework & Quizzes, and Exams

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<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exams (three exams, 15% each)</td>
<td>45</td>
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<tr>
<td>Homework (MyLabsPlus)</td>
<td>20</td>
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<tr>
<td>Final Exam</td>
<td>20</td>
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<tr>
<td>Participation</td>
<td>5</td>
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Grades will be assigned according to the following scale.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90%-100%</td>
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<tr>
<td>B</td>
<td>80%-89.99%</td>
</tr>
<tr>
<td>C</td>
<td>70%-79.99%</td>
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<tr>
<td>D</td>
<td>60%-69.99%</td>
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<tr>
<td>F</td>
<td>below 60%</td>
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## I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY WEEK)</th>
<th>TOPIC</th>
<th>ASSIGNMENTS</th>
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</thead>
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| 5/29-5/31      | Syllabus discussion  
10.1 Introduction to Limits  
10.2 Infinite Limits / Limits at Infinity  
10.3 Continuity | MyLabsPlus 10.1, 10.2, 10.3 |
| 6/4-6/7        | 10.4 The Derivative  
10.5 Basic Differentiation Properties  
10.6 Differentials  
10.7 Marginal Analysis in Business & Economics Review & Exam 1: Chapter 10 (Th. Jun 7th) | MyLabsPlus 10.4, 10.5, 10.6, 10.7 |
| 6/11-6/14*     | 11.2 Derivatives of Exponential and Logarithmic Functions  
11.3 Derivatives of Products and Quotients  
11.4 The Chain Rule  
11.5 Implicit Differentiation  
| 6/18-6/21      | 12.1 First Derivative and Graphs  
12.2 Second Derivative and Graphs  
12.3 L’Hopital’s Rule  
12.5 Absolute Maxima and Minima  
12.6 Optimization Review & Exam 3: Chapters 12 (Th. Jun 21th)  
13.1 Antiderivatives and Indefinite Integrals | MyLabsPlus 12.1, 12.2, 12.3, 12.5, 12.6, 13.1 |
| 6/25-6/28      | 13.2 Integration by Substitution  
13.3 Differential Equations; Growth and Decay  
13.4 The Definite Integral  
13.5 The Fundamental Theorem of Calculus  
14.1 Area Between Curves  
| 6/29*          | Final Exam (Chapter 10-14) | |

Note: Changes in this course schedule may be necessary and will be announced to the class by the instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

## J. COURSE POLICIES

### Attendance/Tardiness
You are expected to attend every class session, and arrive on time. There is no make up for class activities, you need to be present to participate. All the absences will be considered “unexcused” unless you have an exceptional situation (e.g., documented illness, family situation), and you email the instructor about it.
Late Work and Make-up Exams
Late assignments will not be accepted, unless exceptional circumstances prevent you from completing them. Extension of deadlines will be at the instructor’s discretion. Late assignments may result in partial or total loss of credit. There are NO make-ups for exams or in-class activities.

Extra Credit
There may be extra credit offered for this course. This possibility will be announced and discussed in class.

Cell Phone Use
Please silence phones before coming to class. If you need to take a call, please go outside the classroom.

Laptop Use
In general, you cannot use your laptops during class activities or exams. For special circumstances (e.g., presentations), or special needs, please talk with the instructor.

Food in Class
Refrain from bringing food to class. For special needs or occasions, please talk with the instructor.

Missed Exam
Exceptional circumstances (e.g., documented illness, family situations) may be considered at the instructor’s discretion.

Participation
You are expected to come to class prepared every time, and participate in class activities.

K. COLLEGE AND UNIVERSITY POLICIES

• Academic Integrity (University)
  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 a failing grade.

• 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.

• Statement of Civility
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We
expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  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 your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.** 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. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, 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 Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  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 (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

  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. http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.
I. OTHER INFORMATION

- Academic Advising
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.