A. COURSE INFORMATION

Course number/section:  MATH 2413.002
Class meeting time:  Lecture MW 4:00-5:53 PM
Class location:  Lecture OCNR 133
Course Website:  bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor:  Dr. Baohua Chen
Office location:  CI 306
Office hours:  MW 1:00-3:30 pm
Telephone:  361-825-6019
E-mail:  baohua.chen@tamucc.edu
Appointments:  Appointments outside of office hours are available by request

C. COURSE DESCRIPTION

Catalog Description
Limits, continuity, derivatives, applications of the derivative, and an introduction to integrals. Contains a laboratory component. Counts as the mathematics component of the University Core Curriculum.

D. PREREQUISITES/COREQUISITES

Prerequisites:  Math 1314 (College Algebra) and Math 1316 (Trigonometry), or Math 2312 (Pre-calculus), or placement beyond Math 2312.
Corequisites:  Enrollment in lab MATH 2413-2XX.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Textbook
Software:  WebAssign access for homework assignments. Class Key may be purchased through the link.

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 students 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.

Upon successful completion of this course, students should be able to:

1. Determine the existence of limits using the definition of limit, Calculate the limits using limit laws, and l'Hospital’s Rule to find the limits of indeterminate forms. Use calculations of limits to determine local and end behavior of functions.

2. Calculate derivatives of functions from the definition, by applying appropriate rules, and by using implicit and logarithmic differentiation.

3. Interpret derivatives as slopes of tangent lines and instantaneous rates of change. Relate units of a derivative to the units of the dependent and independent variable.

4. Apply derivatives of functions appropriately to: create linearization and differentials of functions; determine and apply related rates of change to solve problems; solve optimization problems; and determine geometric features of graphs of functions.

5. Use Riemann sums to approximate areas and to estimate accumulations of rates.

6. Use anti-derivatives, the Fundamental Theorem of Calculus, and appropriate substitutions to evaluate integrals. Then interpret the results of integration as either a signed area under a curve, or as a function.

7. Recognize and determine the relationships between the graphs of a function, its derivatives and its integral.

G. **INSTRUCTIONAL METHODS AND ACTIVITIES**

Methods and activities for instruction include lecture by the instructor and participation by the students by doing problems in class.

- **Homework:** Homework will be assigned after each class through WebAssign. No homework in test weeks. Any homework questions will be answered during office hours if time does not permit in class. On-campus free tutoring in CASA is another way of getting help with homework.

- **Test:** There will be two in-class tests. They are tentatively scheduled for
  Test 1: Monday, June 17\textsuperscript{th} (Chapter 2)
  Test 2: Monday, July 22\textsuperscript{th} (Chapter 4)

- **Midterm Exam:** Wednesday, July 10\textsuperscript{th} (Chapters 2, 3)

- **Common Final Exam:** Wednesday, August 7\textsuperscript{th} (Chapters 2-5)

- **Lab:** Two labs per week. You will practice lecture-related questions; work on computer-based labs (Matlab) to learn programming the mathematics taught during lecture.
H. MAJOR COURSE REQUIREMENTS AND GRADING

Grades will be calculated by homework, test, exam and lab, according to the following percentages.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>10%</td>
</tr>
<tr>
<td>Test 2</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Homework</td>
<td>10%</td>
</tr>
<tr>
<td>Labs</td>
<td>20%</td>
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</tbody>
</table>

Final grades will be assigned according to the following table:

**Percentage Grade**

- ≥ 90.0% A
- ≥ 80.0% B
- ≥ 70.0% C
- ≥ 60.0% D
- Below 60% F

**Note:**
- No homework grades and no test grades get dropped.
- Labs are graded by the TA. Lab has its own syllabus whose policies supplement this syllabus.
- Final exam score will replace one of lower scores in tests (unless the final score is lower than two test scores)

I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Sections</th>
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<tbody>
<tr>
<td>June 3</td>
<td>Syllabus and Pre-Calculus Review; 2.1-2.2</td>
</tr>
<tr>
<td>June 10</td>
<td>2.3-2.6; 2.7-2.8</td>
</tr>
<tr>
<td>June 17</td>
<td>Test1; 3.1 3.3, 3.6</td>
</tr>
<tr>
<td>June 24</td>
<td>3.2, 3.4, 3.5</td>
</tr>
<tr>
<td>July 1</td>
<td>3.7-3.10; 4.4</td>
</tr>
<tr>
<td>July 8</td>
<td>Review; Midterm exam</td>
</tr>
<tr>
<td>July 15</td>
<td>4.1- 4.3, 4.5; 4.7-4.9</td>
</tr>
<tr>
<td>July 22</td>
<td>Test 2; 5.1-5.2</td>
</tr>
<tr>
<td>July 29</td>
<td>5.3; 5.5</td>
</tr>
<tr>
<td>August 5</td>
<td>Review; Final exam</td>
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</tbody>
</table>
Note: Changes in this course schedule may be necessary and will be announced to the class by the instructor. The assignments, quizzes 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. 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 within 24 hours.

- **Late Homework Assignments**
  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.

- **No Make-up for Midterm/Final Exams**
  **Missed Exam**
  All absences from class or exams will be considered unexcused unless they are documented in advance as excusable with the instructor or as soon as possible in the case of emergencies. No credit will be awarded for work missed resulting from unexcused absences.

- **Extra Credit**
  There will be no extra credit for this course.

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

- **Laptop Use**
  Laptop or tablet use is not allowed during class.

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/](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.

L. **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.