A. COURSE INFORMATION

Course number/section: Math 2413.006
Math 2413.007

Class meeting time: Math 2413.006 MW 2 ~ 3:15 pm
Math 2413.007 TR 2 ~ 3:15 pm

Class location: Math 2413.006 IH-157
Math 2413.007 CS-101

Final Exam Dates: May 3rd (Friday) at 1:45 pm ~ 4:15 pm
Common Final (Please make plan to be there)

B. INSTRUCTOR INFORMATION

Instructor: Dr. Ping-Jung Tintera
Office location: CI-334
Office hours: TR 11 ~ 12:30 pm and MW 1 pm ~ 2 pm
Telephone: 361-825-3483
Email: ptintera@tamucc.edu

C. COURSE 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 AND COREQUISITES:

Math 1314 and 1316, or Math 2312, or placement beyond Math 2312. Fall, Spring, Summer.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES:

Textbook: Calculus Early Transcendentals, 10th Ed. By James Stewart. A graphing calculator TI-83 or TI-84 is required for the course. No TI n-spire for the class for the entire semester.
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. Calculate and determine the existence of limits using the definition of limit, basic properties, and L’Hospital’s Rule. 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. Determine if functions meet hypotheses of theorems and draw appropriate conclusions. Give examples and counterexamples.
6. Use Riemann sums to approximate areas and to estimate accumulations of rates.
7. Use anti-derivatives, the Fundamental Theorem of Calculus, and appropriate u du substitutions to evaluate integrals. Then interpret the results of integration as either a signed area under a curve, or as a function.
8. 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:

- 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,

H. MAJOR COURSE REQUIREMENTS AND GRADING:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exams</td>
<td>60% (3X20% each)</td>
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<tr>
<td>Quizzes</td>
<td>0%</td>
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<tr>
<td>Homework</td>
<td>0%</td>
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<tr>
<td>Presentations</td>
<td>0%</td>
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<tr>
<td>Labs</td>
<td>15%</td>
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<tr>
<td>Papers</td>
<td>0%</td>
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Attendance       MANDATORY
Grading scale:    A: 90 – 100,   B: 80 – 89.99,   C: 70 – 79.99,   D: 60 – 69.99,   F: 59.98 -

I.  COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Date (by week)</th>
<th>Topics</th>
<th>Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1.4, 1.5, 2.1, 2.2</td>
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<tr>
<td>2</td>
<td>Functions and Limits</td>
<td>1.4, 1.5, 2.1, 2.2</td>
</tr>
<tr>
<td>3</td>
<td>Limits and Continuity</td>
<td>2.3, 2.5, 2.6</td>
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<tr>
<td>4</td>
<td>Derivatives and TEST 1</td>
<td>2.7, 2.8</td>
</tr>
<tr>
<td>5</td>
<td>Derivatives</td>
<td>3.1, 3.2, 3.3</td>
</tr>
<tr>
<td>6</td>
<td>Derivatives</td>
<td>3.4, 3.5, 3.6</td>
</tr>
<tr>
<td>7</td>
<td>Derivatives</td>
<td>3.7, 3.8</td>
</tr>
<tr>
<td>8</td>
<td>Related Rates and TEST 2</td>
<td>3.9</td>
</tr>
<tr>
<td>9</td>
<td>Linear Approximation and Max/Mini</td>
<td>3.10, 3.11, 4.1</td>
</tr>
<tr>
<td>10</td>
<td>Mean Value Theorem and their graphs</td>
<td>4.2, 4.3</td>
</tr>
<tr>
<td>11</td>
<td>Graphs and L'Hospital's rule</td>
<td>4.4, 4.5</td>
</tr>
<tr>
<td>12</td>
<td>Optimization, Antiderivatives, and Test 3</td>
<td>4.7, 4.9</td>
</tr>
<tr>
<td>13</td>
<td>Integrals</td>
<td>5.1, 5.2</td>
</tr>
<tr>
<td>14</td>
<td>Integrals</td>
<td>5.3, 5.4, 5.5</td>
</tr>
<tr>
<td>15</td>
<td>Common final exam: 5/0X</td>
<td>1:45 ~4:15 pm</td>
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J. COURSE POLICIES

- **Attendance is mandatory.** Attendance will be checked each class period and each absence after the 3rd time will result in one letter grade lower (5th 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. No grades will be distributed.
- **Cell phone, I-phone watch and any electronics using are 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” regardless 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 nor over the weekend 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 for any test which includes the final exam unless you could provide proper documentation from either medical doctors or any court orders.** Without taking final exam, it will be an “0” for the final exam.
- Help: CASA 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.

This syllabus is a binding agreement 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.

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.

- Student 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
thing, 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.

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 and 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.