Calculus 1
Math 2413.002
Department of Mathematics and Statistics
Spring 2019

A. COURSE INFORMATION
   Course number/section: Math 2413.002
   Class meeting time: TH 3:30 – 4:45 pm
   Class location: CS-111
   Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
   Instructor: Douglas Johnson
   Office location: CI-367
   Office hours: M 12:00-2:30 pm &
   TH 2:-3:15pm
   Telephone: (361) 825-2844
   e-mail: douglas.johnson@tamucc.edu
   Appointments: Via email

C. COURSE DESCRIPTION
   Catalog 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.

   Extended Course Description
   Registration for one section of the lab is required for this course. Lecture and lab together count
   as a four-hour course.

D. PREREQUISITES AND COREQUISITES
   Prerequisites
   Math 1314 (College Algebra) and Math 1316 (Trigonometry), or Math 2312 (Pre-calculus), or
   placement beyond Math 2312.

   Corequisites
   Registration for one lab for Math 2413

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES
   Required Textbook(s)
   Calculus: Early Transcendentals, by Stewart, 8th Edition

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,
- Handouts given immediately after instruction to reinforce lecture and identify misconceptions to be typically completed in class,
- Explaining various mathematical techniques in a collaborative online environment inside of Blackboard,
- Weekly quizzes which are taken directly from the suggested homework list and handouts.
H. MAJOR COURSE REQUIREMENTS AND GRADING

The student learning outcomes described in Section F will be measured via progress on quizzes, tests and the final exam.

The final exam is comprehensive and is written by the Mathematics Department. All students will take a common final exam.

I do expect you to remember all concepts that I teach as noted on this syllabus.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exam 1, 2 &amp; 3</td>
<td>40%</td>
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<tr>
<td>Quizzes &amp; Participation</td>
<td>15%</td>
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<tr>
<td>Labs</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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Quizzes & Participation (15%)
Quizzes will be given throughout the semester. Any missed quizzes will receive a grade of zero (0), and there will be no makeups on quizzes without prior approval. Participation will be based on in class assignments which are due the same day they are assigned.

Homework
Homework will be posted regularly on Blackboard via announcements. Keep good records of your homework as you can use your handwritten homework on quizzes.

Exams (40%)
There will be 3 exams during the semester, and the date of each will be announced at least one week advance. The lowest Exam grade will be dropped. The exams ARE NOT open note or book. Cheat-sheets will NOT be allowed during any exams. So, make sure to memorize all the formulas. Regardless of the reason, a grade of zero (0) will be recorded for any exam not taken, and there will be no make-up on exams.

Labs (20%)
The lab part of the course is grade by the TA.

Final Exam (25%)
The departmental common final exam will be comprehensive and set for all students who are in Math 2413 on the same day.
There will be NO MAKEUP for the final exam. PLAN AHEAD!!
I. **COURSE CONTENT/SCHEDULE**

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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**

Attendance is mandatory by Texas A&M University. Everyday a new topic is covered, and any material that is missed could affect your progress. If you have to miss, please make sure that you
get the notes from someone. Also, you are responsible for what is due that week when you are absent. Assignments are available 24 hours per day for the entire week it is due. There will be no excuses for missing assignments unless it is an absolute emergency with documentation.

**Late arrival to exams**
If you arrive at any exam after the first person has completed the exam and left the room, you will not be allowed to take the exam.

**Missed Exam**
Makeup exams will generally NOT be administered. The lowest exam grade will be dropped. An exception can be made only with written evidence of an official University excused absence. For an absence to be considered excused, the student must notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such notification is feasible. In cases where advance notification is not feasible (e.g. accident or emergency) the student must provide notification by the end of the second working day after the absence. In the case of illness or injury, students are required to obtain a confirmation note from a health care professional affirming date and time of a medical office visit regarding the illness or injury.

**Make-up Quizzes**
NO MAKEUPS will be given for quizzes. You will receive a zero for any missed quizzes.

**Extra Credit**
I do not offer extra credit.

**Cell Phones**
All cell phones must be silenced and out of sight unless being utilized for an inclass assignment

**Exam Procedures**
During an exam all watches and cell phones must be stored out of sight and placed on silent/off. Any long sleeves must be rolled up to the elbows. All students will sit so that they are spaced out as much as possible. Be prepared to present a student ID at the beginning of the exam.

**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/](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](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](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.

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.

- **CASA**
  The Center for Academic Student Achievement is your best free resource on campus. It provides free academic support through tutoring, counseling, and helps you navigated through higher education. The CASA website is: http://casa.tamucc.edu/

**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.