

MATH 1710.621
CALCULUS
FALL 2014

Scientia Imperii Decus et Tutamen ¹

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August 22, 2014

¹Taken from the coat of arms of Imperial College London.

FALL 2014 COURSE: MATH 1710.621, CALCULUS I.

PREREQUISITES: MATH 1650 (Pre-Calculus) or {MATH 1600 (Trigonometry) and MATH 1610 (Functions, Graphs and Applications)}.

CLASS MEETS: We have CURY 322, MWF, 10:00 a.m. - 10:50 a.m. and CURY 210, TR, 9:30 a.m. - 10:50 a.m. reserved for our use. In despite of the fact that this is a 4 hour class, initially we will meet MTWRF, 10:00 a.m. - 10:50 a.m. in the appropriate CURY classroom. An exception to this is that tests will be given on Tuesday or Thursday, 9:30 a.m. - 10:50 a.m. This will give us some flexibility if we need to cancel some future classes and/or if we become ill. Later on these meeting days and time might well be modified.

FINAL EXAM DATE AND TIME: The final is scheduled for Thursday, December 11, 2014 in CURY 210, 8:00 a.m. - 10:00 a.m.

TEXT: William Briggs and Lyle Cochran with the assistance of Eric Schultz, Calculus, Addison-Wesley, Boston, copyright 2011, ISBN 978-0-321-33611-8.

INSTRUCTOR: Robert R. Kallman, 315 GAB [office], 940-565-3329 [office telephone], 940-565-4805 [fax], kallman@unt.edu [e-mail]

OFFICE HOURS: Tuesday, Thursday, 12:30 p.m. - 1:50 p.m. and before and after class

ATTENDANCE POLICY: Mandatory. Specifically for TAMS students: if you are absent for any reason, you are required to file an absence report with Dr. Fleming of the TAMS Academic Office.

ELECTRONIC DEVICES: No electronic devices of any sort are to be on let alone used during the class. Repeated flouting of this will result in a grade penalty.

HOMEWORK: Homework will be assigned and some designated subset of it will be graded. The designated homework assigned during a given week at the **beginning** of class on the Thursday of the following week. Late homeworks will not be accepted under any circumstances. Each homework problem will receive a grade of 0, 1, or 2 points. Failure to turn in a homework set on time will result in a grade of -1 for that homework set. Take the homework seriously, for our performance on the homework will constitute 40our grade.

GRADING POLICY: Grades will be based on the total number of points accrued from the assigned graded homeworks, from three in class 80 minute examinations (5 problems plus 1 bonus question), given circa late September, late October and late November, and from an in class 120 minute final (8 problems plus 1 bonus question). The number of points per test and final problem will normally be 10. There is no excuse for missing a test and no makeup tests will be given under any circumstances. A student missing a test will receive a grade of -1 on that test. If a student is unavoidably absent from a test and makes arrangements with the instructor well before the test date, then the grade assigned to the missing test will be prorated by the student's performance on the final examination minus 10 points. It is difficult a priori to determine the precise break points for the final grades. However, the golden rule in determining the final assigned grade is that if the number of points earned by person A is \geq to the number of points earned by person B, then person A has a grade which is \geq to the grade of person B. The only possible exception is that you

must take the final examination and receive a passing grade on the final in order to get a grade greater than F.

TOPICS: The topics to be covered can be found in most of Chapter 1 - Chapter 6 plus a few extra topics. It is a rather ambitious goal to cover these topics in some depth. This will require considerable work on the part of the students and the instructor. Some supplementary notes will be handed out. At 5 class days per week we will have 72 class days (plus a final day) to cover 42 sections. This should give us plenty of slack for three tests and lots of time for review if we stick to 5 classes per week.

APPROXIMATE ITINERARY: The following is a first attempt, very rough approximation to what our schedule will be. This will perhaps be dynamically reconfigured as the semester progresses since it is of course impossible to make such a schedule with hard-and-fast rules.

Test #1, Thursday, September 25, 2014, covering 1.1 - 3.5.

Test #2, Thursday, October 23, 2014, covering 3.6 - 4.9.

Test #3, Tuesday, November 25, 2014, covering 5.1 - 6.4.

Final, Thursday, December 11, 2014, cumulative, 1.1 - 6.7.

ASK QUESTIONS in class so that we may all benefit. If you need help, it is your responsibility to seek me out. See me during my office hours. Empirical evidence suggests that there is a strong correlation between the amount of work done by the student and his/her final grade.

STUDENTS WITH DISABILITIES: It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.

STUDENT BEHAVIOR IN THE CLASSROOM: The Powers That Be have strongly suggested that students be given the following statement:

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at www.unt.edu/csrr

In other words, cause trouble in the classroom and you will probably be cast into the Darkness and sent to the KGB.

How to Study for This Class

- Attend every class.
- Pay attention in class, take careful notes, and ask questions if needed.
- The evening of every class go over your classroom notes, list topics on which you have questions or need clarification, read the relevant section of the textbook, do the assigned homework to be graded, look over the additional homeworks to verify that you understand how to do them and make note of those additional homeworks that you do not understand to ask about them during the next class. It is important that you put a great deal of effort into the homework, both those to be turned in and those that are less formally assigned. One becomes adroit at any human activity - e.g., hitting a fast ball, throwing a slider, making foul shots or jump shots, or driving off a tee - only with a great deal of practice. The same applies to calculus.
- Do not waste your time memorizing endless lists of derivatives and antiderivatives. This in fact is counterproductive. Instead, know a few basic computational techniques (e.g., product rule for differentiation, chain rule for differentiation, $\sin' = \cos$, etc.), and try to understand the big picture and concepts involved in problem solving. All of the problems encountered in this class should be first approached by asking oneself what is a reasonable way to proceed. Then given the proper path or direction, you can then solve the problems by small, logical steps that inevitably lead one to the final solution.