Classroom: Lecture MW 2:00-3:20 pm in PKH 304
Lab MW 3:30-4:20 pm in PKH 304 or in pc lab = PKH 315.

Contact info: PKH 462, 817-272-3932, vancliff@uta.edu

Web page: http://www.uta.edu/math/vancliff/T/S08

My Office Hours: Mon & Wed after class in classroom or in PKH 462, or by appointment

GTA: Padmini Veerapen, PKH 403, ppveerapen@uta.edu

GTA Office Hours: MW 1:00-1:50 pm (?) in PKH 403, or by appointment.

Text Book: Thomas’ Calculus, Early Transcendentals, 11th Ed., Media Upgrade, Addison-Wesley (required).

Textbook website: http://www.coursecompass.com Course ID: vancliff90484

Calculator: on tests/quizzes, you will be allowed to use nonprogrammable calculators with basic computational features, such as arithmetic and transcendental functions. Calculators with the following features are NOT allowed: graphing, equation solving, differentiation & integration; any device that has internet or e-mail capabilities – this includes cell phones – and any device with a QWERTY keyboard are also not permitted (use of such a calculator on a test/quiz will disqualify that test/quiz). Recommended calculators are TI-30XA or TI-30XII; the latter is on the current list of calculators allowed for the professional engineering exams.

Tests:
• a short quiz most weeks (check website for actual day each week);
• 3 comprehensive tests on Wed Feb 6 (30 minutes), Wed Mar 5 (50 minutes),
  Wed April 16 (30 minutes);
• one 2.5-hour comprehensive Final examination on Sat May 3, 12:00-2:30 pm
  (room to be announced).

  Bring photo ID to all tests. Make a note of these dates!!

Weighting: graded assignments = 15%, Quizzes = 15% total, Test 1 = 10%, Test 2 = 20%,
Test 3 = 10%, Final = 30%.

Your lowest 3 quiz grades will NOT be used to compute your course grade.

Not passing the Final exam will prevent you from earning a grade of C or higher in the course.

Attendance and participation are also considered in computing your course grade (e.g., if a student’s grade is borderline between one grade and another). Attendance will be recorded from approximately week 2 onwards. The assignments will be graded by the GTA; the tests & quizzes will be graded by myself and/or the GTA.

Important Dates: Mon Jan 21 = Martin Luther King Jr. Day (UTA holiday),
Wed Jan 30 = census date,
Mar 17-21 = Spring break,
Fri Mar 28 = last day to drop course with W (see page 4),
Wed April 30 = last class,
test dates given above.
EXPECTED LEARNING OUTCOMES

Upon completion of Honr/Math 2425, for any of the topics listed below, you should be able to (a) compute and/or solve problems, (b) justify and explain your steps in problem solving (in particular, you should be able to construct correct and detailed mathematical arguments to justify your claimed solutions to problems), and (c) apply the methods and techniques to elementary applications from physics. Topics:

1. (Techniques of Integration) The technique of integration by parts, trigonometric techniques of integration, the technique of integration by partial fractions.

2. (Infinite Processes) Improper integrals, sequences, series, convergence and divergence of sequences and series, geometric series, telescoping series, comparison tests, integral tests, (generalized) ratio test, root test, alternating series, conditional vs. absolute convergence, error estimates of alternating series.

3. (Functions as Power Series) Power series, interval and radius of convergence, representing a known function as a power series, derivatives and integrals of power series, Taylor/Maclaurin series, approximating a known function by Taylor polynomials, error estimates of Taylor polynomials.

4. (Applications of the Integral) Area between two curves, volumes using slices, volumes of revolution using disk and shell methods, arc length of curves, surface area of curves of revolution, polar coordinate curves, the application of polar coordinates to area, volume and surface area.

5. (Introduction to 3-dimensional Calculus) Vectors, dot product, cross product, equations of lines, planes, spheres, cylinders and quadric surfaces, angles between vectors, distances between different 3-dimensional objects.

In addition, students will be able to describe a brief biography of some mathematicians.

COURSE STRUCTURE

The main goal of this course is to continue to teach you about rates of change in many guises and its reverse process, and to enable you to further develop your problem-solving skills (see above). We will cover most of Chapters 6, 8, 10-12 (but in a different order from that presented in the book). I will assign reading from the book to do at home. There will be a lot of homework assigned, including some essay-style questions. It is highly possible that questions from the homework or from the assignments could appear on the tests/quizzes.

In most Monday labs, you will be given a worksheet or a computer assignment. In most Wednesday labs, you will be given a short quiz and the rest of the time will be available for you to ask questions of the GTA. Conceivably, there could be a few weeks in which the schedule will vary from that described here.

HELP OUTSIDE CLASS TIME

My office hours & the GTA’s office hours are given above. These are times when we will be available to discuss the material/homework/tests. No appointment is necessary for those times. If, however, those times are inconvenient for you, then make an appointment for another time (e.g., e-mail me stating the times you prefer).

The Math Clinic, located in PKH 314, is open 7 days a week. You may go there for help, or simply to work and ask for help if the need arises. You have already paid a fee for the Math Clinic. Please avoid using cellular phones in the Math Clinic, as their use is distracting to the other students present.

The textbook’s website (given above) contains some solutions and sample tests and sample exercises. The website is interactive in that you can ask it to help you solve exercises and it will. The website also contains the textbook and videos and animations that accompany the book. The textbook also has live math help available by phone 888-777-0463 Sunday-Thurs (late afternoon-late evening). You will need a student code (packaged with your new textbook) in order to access these services.
Tutoring (at cost) is available at the SOAR Office in Hammond 132 and at the Science Learning Center in Life Science 106. A list of tutors is available from the Math Department Office, but this list is not endorsed by the Math Department.

My web page will list the homework as the semester progresses as well as other miscellaneous information pertinent to this course. My web-page address is above.

HOW TO DO WELL IN THIS COURSE

The best way to guarantee a good grade in this course is to take GOOD lecture notes and to READ THEM over after class, and to do ALL the assignments on a regular basis (this is your brain exercise!) and to discuss the material with each other. After completing any one assignment, put together a list of the ideas you have learned in doing that assignment; keep your list as help when you study for the tests. Follow the study techniques that will be described to you. Use all the resources available to you: instructor, GTA, textbook, textbook’s website, math clinic, etc as described above. If you are doing enough work, then you should be spending at least 8 hours on this class outside class time; less than 8 hours means that you are not meeting your true potential.

DISABILITY ACCOMMODATIONS

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 — The Rehabilitation Act of 1973 as amended. With the passage of the Americans with Disabilities Act (ADA), pursuant to Section 504 of the Rehabilitation Act, there is renewed focus on providing this portion of the population with the same opportunities enjoyed by all US citizens. In particular, students in this situation who desire accommodation should notify me informally this week, and notify the Disabilities Office as soon as possible with official authorized documentation; the Disabilities Office will give you documentation that will authorize me to provide accommodation and the nature of the accommodation.

EXAMINATION PROTOCOL

If you have a conflict with a test or the Final, you must contact me as soon as possible. If you miss a test (not quiz) or the Final, you should contact me as soon as possible (in person, or by phone (leave a message on the machine if noone answers) or by e-mail). If you miss a test or the Final for an authorized reason which can be verified with official documentation (e.g., hospitalization), then a make-up test will be considered. An alternative to a make-up test is to have the next equivalent test count for itself and the missed test. Students who miss tests due to UNauthorized reasons will NOT be accommodated. Note that up to 3 missed quizzes (even for authorized reasons) will not be accommodated, but will count as one of the 3 lowest grades that are not computed towards your course grade. If you miss more than 3 quizzes, official documentation validating authorized reasons for missing ALL the missed quizzes must be presented for any accommodation to be considered.

DISTRACTION IN THE 21ST CENTURY!!

Cellular phones should be SWITCHED OFF during all classes and during all tests. Cellular-phone use will not be permitted in class. If you NEED to use your cellular phone for an URGENT reason during class, you may leave the room to talk and return to class when you are done. If you leave class for a nonurgent reason, the class and I prefer that you do not return, but I will subtract your name from the attendance sheet. During tests, your cellular phone should be out of sight. If you need to use your cellular phone for any reason during a test, then you may leave the room to talk, but you will not be able to continue the test.

The University reserves the right to impose disciplinary action for any kind of infraction of University policies. Engagement in conduct which disrupts, obstructs or interferes with activities authorized by the University will result in disciplinary action against the perpetrator(s). Such action includes leaving and returning to the room frequently.
SCHOLARLY INTEGRITY

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline includes suspension or expulsion from the University and a grade of FAIL in the class given to involved student(s). Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22 of the Regents’ Rules and Regulations states the following. “Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or material that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts”.

Photo-ID is REQUIRED at all tests. The University has informed all its faculty that steps should be taken to discourage cheating on tests. As such I will uphold the following during the tests:

- if you wish to leave the room during a test, you should ask permission first and turn in your test to me — only in exceptional circumstances will I let you continue the test should you return (so it is better to be 3 minutes late to the test, rather than ask to go to the restroom during the test);
- if you finish a test early but prefer to stay in the room, then you should NOT get out any work, book nor item, no matter what the subject matter is.

Remember, in any test, keep your eyes on your own work only.

DROP POLICY

The last day this semester to drop a course is March 28. Any student who drops the course on or before March 28 will receive a W. **Students must contact an advisor in their major in order to drop a course.**

TUITION NONPAYMENT

If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar’s Office.

GRADE–REPLACEMENT & GRADE EXCLUSION POLICIES

These policies are described in detail in the University catalog and can also be found online at http://www3.uta.edu/registrar/gradeExclusion.asp and at http://www.uta.edu/uac/studentsuccess/grade-exclusion-policy. Students should check the deadline date for requesting such an exclusion/replacement, but it is probably census date date.

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Initial homework:

01/14 Read table 8.1 on pg 538 (ignore items 16, 17, 21, 22)  Read pg 542 and read lecture notes.
   Do §8.1: 1, 5, 8, 17, 18, 20-22, 28, 37, 38, 46, 47, 48, 50, 53, 55, 58, 64, 87, 88.

01/16 Read pgs 545-9 and lecture notes. Do §8.2: 1, 4-6, 11-14, 16, 23, 25, 26, 30, 31, 37, 39-42.
   Finish Parts B and C of Worksheet 1. Submit above on Jan 23.

01/21 Martin Luther King Jr. Day (UTA Holiday)

01/23 Read §8.4 and lecture notes. Do §8.4: 1, 4, 10, 13, 15, 18, 29, 33, 36, 44, 46 (see hint).
   (Hint: for #46, last 2 examples in lecture notes will be helpful.)
   Finish Parts D and E of Worksheet 1. Submit above on Jan 25.