Professor: David McClendon (2046 ASC, phone x2574 (231-591-2574 off campus), hours M 3-4, T 1-2, W 10-11, W 3-4, R 1-2 or by appointment, email: `mcclend2@ferris.edu`)

Lectures: TR 8:00-9:15 AM in STR 212

Computer lab meetings: Section 1: F 9:00-9:50 AM in STR 105

                                     Section 3: W 9:00-9:50 AM in STR 105

In most of these sessions, you will get a lab activity to complete; in others, we will review material from lecture.

Required materials: You need two items for this course:

1. My lecture notes, which can be obtained in either of two ways:
   - as a course pack, available at the bookstore; or
   - online, at my web page (see below for URL) as a pdf file

   You should bring the lecture notes to class every day as they contain the examples and notes from which I will teach the course.
2. A piece of software called *Mathematica*; information about where and how to purchase this software is on the attached handout and on my web page.

Web: I maintain a personal web page at `http://mcclendonmath.com/230.html`; this page contains handouts, old exams, and lecture notes.

Prerequisite: Math 220 with a grade of C- or better, or the equivalent. We will review the high points of Calculus I during the first week of class.

Course material: Techniques of integration; applications of definite integrals; parametric equations; infinite series.

Learning outcomes: After completing Math 230, it is my hope and expectation that students will be able to:

1. recite and interpret definitions of calculus concepts and theorems, and correctly use calculus notation;
2. evaluate integrals with a variety of techniques (including substitutions, parts and partial fractions), using technology as appropriate;
3. write integrals which can be computed to find areas, volumes, arc lengths, probabilities and expected values, etc., and use technology to evaluate these integrals;
4. convert between Cartesian and parametric equations, understand the graphs of parametric equations, and use calculus to study two-dimensional motion;
5. classify (with justification) an infinite series as absolutely convergent, conditionally convergent or divergent;
6. write the Taylor series of a smooth function and apply Taylor series to solve problems.

Grading policy: Homework: 5%. Attendance and in-class activities: 5%. Lab assignments: 12%. Quiz average: 8%. Midterm exams (three of them): 18% each. Final exam: 16%. Grades will be curved at the end of the semester, but an average of 90% guarantees you at least an A-, an average of 80% guarantees you at least a B-, etc.

Attendance policy: I have no formal attendance policy (other than that we'll do some things in class from time to time that may contribute a small amount to your grade). That said, **nothing** is more correlated with strong performance in my classes than attendance in lectures.

Homework: There will be (almost) daily homework assignments. These assignments are **occasionally** collected on dates not announced in advance and graded not for correctness, but for completion. You receive full credit if it looks like you made a serious attempt to solve most of the problems, and you will not if it looks like you just copied answers or if you only did a small amount of the problems. While I don't deduct for errors, I will (time permitting) make comments on your homework while grading to help keep you from making the same mistakes on exams.

Quizzes: There will be 10 in-class quizzes on the dates listed on the course calendar (I reserve the right to change these dates if necessary). These are ~ 10 minutes long and cover the material that has been covered in class since the previous quiz or exam. The lowest three quizzes are dropped; the other seven are averaged to give your quiz average. Makeup quizzes are not given under any circumstances.

Lab assignments: Most days that we meet in the computer lab, you will be given a lab assignment which requires you to use the computer package *Mathematica*. You will be given time during the class session to start the lab, but will be required to finish the lab on your own time. These labs will be due one week after they are assigned, and are graded for correctness.

Midterms: There are four midterms given in class on the dates listed on the attached calendar: **February 16, March 22** and **April 28**. You will not be permitted to use any study aids, calculators or computers on the exams. The midterms are not directly cumulative, but mathematics is "inherently cumulative".
You may make up an exam that you miss (whether your absence is excused or not) but the makeup exams are considerably more difficult. If you miss an exam, contact the professor; you are to make up the exam at the *earliest possible time*.

Final exam: The final exam is cumulative and as with the midterm, you will not be permitted to use any study aids or calculators. However, your final exam score is guaranteed to be no worse than the worst of your three midterm exam grades.

Technology usage: Calculators are never, ever, ever permitted on any quiz or exam - questions on quizzes and exams use "easy" numbers and expressions that a calculus student should reasonably be able to compute and manipulate by hand. That said, we will learn how to use a software package called *Mathematica* which you will use on lab assignments (and some homework).

Supplies: I also recommend bringing a couple of colored pens or pencils to class each day, as some of the pictures we will draw to explain concepts are much more easily understandable when drawn in color.

Getting help: The best place to receive help is my office. In class, I will not have time to take many homework questions, and I will not be able to present all perspectives on

a topic. In office hours, I am able to discuss the material at a much more friendly pace and offer some alternate viewpoints that may help you understand the material better.

If you cannot make my scheduled office hours, you can come talk to me anytime my office door is open. Also, I am more than happy to make an appointment to discuss the material with you. Send me an email.

Students with disabilities who require reasonable accommodations to fully participate in course activities or meet course requirements should register with the Educational Counseling and Disability Services office (x3057, `ecds@ferris.edu`). While ECDS will send me a letter outlining the accomodations to make for you, I would appreciate it if you could contact me immediately for assistance with any necessary classroom accomodations.

Academic dishonesty: Papers will be monitored for "magic answers". Issues with academic dishonesty are taken very seriously, will almost always result in an F for the class, and will be referred to the Office of Student Conduct.