Expectations

Lectures Lecture attendance is not mandatory in the following sense: if you miss a class, you are responsible for figuring out what you missed. In designing lectures, homework, quizzes, and exams, I will assume that you are familiar with material presented in lectures.

Lectures will follow the textbook. I expect that you read the lecture note (and the textbook) and complete the corresponding "Prelecture" module on WebAssign prior to every lecture. You may complete the "Homework" module, as well, if you'd like. I will spend the class time on solving exam-level problems as much as possible, so previewing the material beforehand is essential.

Excellent resources for learning integral calculus are all over the internet. Some good resources that I am aware of are:

1. Khan Academy - Integral Calculus `https://www.khanacademy.org/math/integral-calculus`
2. MIT - Single Variable Calculus (Module 3-5) `http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/`

Take a look at their lectures if you find the textbook insufficient. The Khan Academy lectures are divided into short clips by topics, so they are easier to make use of. The MIT lectures may be slightly more advanced.

Something that I should direct your attention here is the importance of attending lectures. As I just said, there is a plethora of learning resources available for free at anytime anywhere you want—so why bother coming to lectures? A short answer: this course is custom-made for the enrolled students. I will ask you to solve problems in class, and to present them. As we go through each problem, we will identify ideas that need be introduced or emphasized. The goal of each class is to expose you not only to methods of solving integration and series problems, but also to good ways of thinking about and approaching them. I'd like discussions to be as student-driven as possible, but I will be around to offer guidance.

So your participation will be essential in making this course a great one. Bring good questions, and don't hesitate to ask them! If you're not comfortable with asking questions in class, you should put efforts into doing it. Just like anything else, it takes some practice to become good at asking questions. You'll find it a useful learning tool not only in classrooms, but also in a variety of other situations.

WebAssign assignments The purpose of homework is not to test your knowledge, but to solidify and deepen your understanding of the material. Although homework contributes only a little to the final grade, putting efforts into the assignments is a key to do well in the course. The exams test what you learn in homework assignments.

For whatever reasons, mathematics is something that you learn through doing rather than reading. Don't expect to just "ace" exams without working out a number of problems thoroughly. The daily assignments are meant to provide opportunities to solve problems as well as to give an idea of what kind of problems you are expected to become able to solve by the end of this course.

Collaborating with others on homework problems is strongly encouraged. Besides the obvious advantage of getting a problem set done faster, you learn how to work on a technical problem collaboratively, which is not only related to your success in this course, but also a valuable skill for your future courses and even jobs. However, you should attempt the problem independently before discussing it with others. If you come up with a solution in collaboration with your fellow students, you should rethink about it on your own to see if you really understand the solution.

Though one problem may be more difficult than another, each problem is designed so that you (and your collaborators) will be able to solve it based on lecture notes, corresponding sections from the textbook, and your reasoning skills. Don't expect to solve a problem in one try. If one approach doesn't work, think about why it didn't work. If your initial approach isn't working at all, then look for a different approach that may be applicable.

Although you have other academic and non-academic obligations, try to learn the material as consistently as possible. Out-of-class work will also make your in-class time more meaningful.

Exams and Mini-Exams Exams are given to see what you have learned and to test your familiarity with the subject. You are expected not only to know concepts and standard techniques, but also to see which ones are useful for a given problem and be able to follow the line of thought until a complete solution, in a rather short amount of time. For some problems, it may not be immediately obvious what concepts are applicable. To solve such problems, of course, requires a certain level of mastery of the subject beyond a rudimentary one. If you know all concepts introduced in the course, all problems on the exams will be ones that you can work out

if you "have enough time." But to do well on the exams requires more, namely, knowing how to use those concepts effectively, and they are designed in such way.

For the purpose of measuring the level of familiarity, bringing notes is not allowed, and an unfortunate side-effect is that you will need to memorize a few formulas. This, however, is usually overcome by understanding the ideas underlining formulas in most cases.

As stated in the syllabus, there are two midterm exams, and a final. The mini-exams are scheduled on weeks between the midterms and final. The mini-exams will be significantly shorter than the midterm and final, but expect them to be of the same difficulty.