

MATH 2250, Fall 2009: Calculus I for Scientists and Engineers (24-458)

INSTRUCTOR	Christopher Drupieski, cdrup@math.uga.edu
TIME & PLACE	Boyd GSRC Room 303, MWF 9:05–9:55am, Boyd GSRC Room 322 T 9:30–10:45am
OFFICE HOURS	To be announced during the first week of classes.
COURSE PAGE	http://www.math.uga.edu/~cdrup/093math2250/index.html
TEXTBOOK	<i>University Calculus</i> by Hass, Weir and Thomas (ISBN 0-321-35014-6). We will cover Chapters 2–5.
COURSE INFORMATION	<p>This course is an introduction to the calculus of functions of a single real variable. It is open to all students, though it is primarily aimed at students specializing in science and engineering. Students taking this course should already have a strong working knowledge of (and not merely a passing familiarity with) algebra, geometry, trigonometry, exponentials and logarithms.</p> <p>My goal in teaching this course is, first and foremost, to prepare you so that you can use Calculus in your chosen field of interest. Beyond that, I hope to help you become better life-long learners. Being able to read and make sense of a complicated text is a valuable skill. This is something we will work on throughout the year, through reading assignments and class discussions.</p>
GRADING	<p>Student performance will be evaluated based on three midterm examinations, regular quizzes and homework assignments, and a comprehensive final exam. Final percentage grades will be weighted as follows:</p>

Homework	30%
Midterm Exams (3)	15% each
Final Exam	25%

Overall percentages of at least 90, 80, 70, 60 will guarantee letter grades of at least A-, B-, C-, D, respectively. Other \pm grades will be assigned at the discretion of the instructor. Exact cutoffs for other \pm grades will be determined after all coursework has been graded, and may depend on the distribution of student grades within the course.

ATTENDANCE	<p>Students are expected to attend classes regularly. University policy states that a student who incurs an excessive number of absences may be withdrawn from the course. (The Math Department defines “excessive” to be four or more unexcused absences.) I will count an absence as excused if you clear it with me ahead of time, or, in the case of legitimate personal or family emergency, if you provide some form of documentation (e.g., doctor’s note) upon your return.</p>
HOMEWORK	<p>It is my fundamental belief that the most effective way to <i>learn</i> mathematics is by <i>doing</i> mathematics. As such, homework will play a very important role in this course. To get maximum benefit, you might plan to spend 2–3 hours doing homework for each hour of time spent in class.</p> <p>There will be two forms of homework in this class. The first is reading homework. The night before we begin a new topic, you will be assigned to read the corresponding section of the textbook. You may not understand everything the authors say, but you should be able to pick up most of the main ideas, and become familiar with the examples. To direct you in your reading, I will ask you to answer certain questions from the <i>Questions to Guide Your Review</i> that appear at the end of the chapter. These review questions mostly gauge how well you understand the main concepts, and are not computational. The day after a reading assignment, we will begin the new topic by discussing your answers to the review questions. To make sure everyone is taking the reading assignments seriously, I will occasionally give you one of the review questions as a quiz at the beginning of class.</p> <p>The second form of homework is written homework. I will assign written homework exercises out of the textbook several times per week. Written homework will typically be due at the beginning of the second class period after it is assigned. For example, if I assign written homework on Monday, it will be due at the beginning of class on Wednesday, and work assigned on Tuesday will be due at the beginning of class on Friday. Due to our large class size, I won’t be able to grade in detail every single problem I assign. Instead, I’ll grade 1–3 problems in detail, and the rest based on completion.</p>

HOMEWORK (CONT.)	<p>Rather than follow the usual routine of 3 lectures + problem session that is typical to a 4 hour class, I would like to spend 15–20 minutes each class period discussing the current homework problems. Taking this time away from lectures puts slightly more burden on you the student to learn a larger share of course content at home, but studies seem to indicate that students learn more when class time is used for working on problems and for correcting misunderstandings, so I hope you'll agree that the extra burden is worthwhile.</p> <p>Since I'm going to be handling a lot of written homework, I'll ask you to adhere to some simple guidelines: Homework should be neat and easy to read. I expect better than rough-draft quality work (this means not to turn in pages of scratched-out computations). If you write your homework in a spiral notebook, then you should trim off the ragged edge before handing it in. Staple together multiple pages; paperclips and folded corners are unacceptable. When asked to provide reasoning, explain your answer in complete English sentences. And above all else, show all of your work.</p> <p>I will keep an up-to-date list of all homework assignments on the course home page. You should check it daily for the latest updates. Late work: I will not accept late homework, though I will drop several homework scores before computing your final average.</p>
EXAMS	<p>There will be three in-class midterm exams and a comprehensive final exam. The tentative dates for the midterm exams are September 8, October 6, and November 10. An unexcused absence from a midterm exam will result in a grade of zero for that assignment. During exams, I reserve the right to provide assigned seating, or to require you to leave all books, bags, jackets, phones, etc. at the front of the room. The Final Exam is scheduled for Monday, December 14, 8–11am. Final exams will only be rescheduled if students submit the required paperwork (see http://bulletin.uga.edu). Students must notify me at least one week in advance of any conflicts with any exam.</p>
CALCULATORS	<p>Calculators are very useful tools, but they can also become terrible crutches. You may find it convenient to use a graphing calculator or other graphing tool while doing some homework exercises, but calculators will be neither necessary nor permitted on exams.</p>
HONESTY	<p>All students are expected to abide by UGA's academic honesty policy. If I suspect that you have cheated on a quiz or exam, I will report it, following university procedures. The university expects all students to live up to the highest standards of academic honesty and ethics, and there are severe punishments for students who violate those standards.</p> <p>You may (in fact, are encouraged to) discuss how to do homework problems with other students, but the work you turn in must be your own doing.</p>
SPECIAL ACCOMODATIONS	<p>If you have a disability or health condition that you believe merits accommodation (e.g., extra time on exams), please make an appointment to see me as soon as possible so that we can discuss the situation.</p>
SEEKING HELP	<p>It is easy for a student to get lost once he or she has fallen behind in this course. If you feel yourself falling behind, or if there is material you don't understand, please take advantage of the many resources available to you:</p> <p>My office hours: I am available in my office at regularly scheduled times to answer your questions. I am also available by appointment. I am happy to answer questions concerning current assignments as well as how past assignments have been graded.</p> <p>Your peers: You should always try a problem on your own first. But if you are truly stuck, seek help from your peers, especially in the homework.</p> <p>Tutoring: Free tutoring services are available from the Division of Academic Enhancement (http://www.uga.edu/dae). Other services may also be available. I will announce these via the course web page as I become aware of them.</p>
COURTESY	<p>As a courtesy to me and to your classmates, please turn off and put away all cell phones and computers during class time. Also, please refrain from entering class late or leaving class early. If this is something you must do, please talk to me about it ahead of time.</p>
CHANGES	<p>It may be necessary to modify this syllabus as the semester progresses. Any modifications will be announced in class, by email, and via my web page.</p>