UF | David Groisser
Department *of* Mathematics

Syllabus and Course Information

MAA 4211 — Advanced Calculus 1
Section 3045, Fall 2015
MWF 7th period, LIT 203

Link to class home page

Instructor : Dr. David Groisser

I receive a ton of email, so please read this before emailing me:

- I won't answer math questions by email.
- **I never provide any grade information by email.**
- **I won't answer anonymous email, or email that lacks an** *informative* **subject line and your full name.**
- For reasons of time and safety, I delete, without reading completely, any email that requires me to open an attachment whose nature or purpose I cannot easily determine without opening.

Office Hours: Tentatively Monday 5th period (11:45-12:35) and Wednesday & Friday 9th period (4:05-4:55). Please come early in the period or let me know to expect you later; otherwise I may not stay in my office for the whole period. See my schedule for updates. Students who can't make scheduled office hours may see me by appointment on most weekdays (but *never on a Thursday*).

If you have the flu or similar contagious disease, or think you might, please do not come to my office.

Textbook: Maxwell Rosenlicht, *Introduction to Analysis.*

Syllabus (course content): Chapters 1–5 of Rosenlicht, but I may not stick religiously to the presentation in the text. General topics will include:

- basic concepts of sets and functions (just a quick review, since you should have seen this in prerequisite courses)
- the real number system
- metric spaces
- continuous functions on metric spaces
- differentiation of real-valued functions of a real variable

Exams. There will be two midterm exams and a cumulative final exam. The midterms will probably be two-hour sit-down exams, scheduled at a late-afternoon or evening time that everyone can make. (I do not find one hour sufficient for a serious exam at the level of this course.)

Unless I say otherwise, you are responsible for knowing any material I cover in class, any subject covered in homework, and all the material in the textbook chapters we are studying. You are also responsible for most of MAS 4105 and the Calculus 1-2-3 sequence (MAC 2311-12-13 or the equivalent). However, remember you should not base any proofs in this class on theorems that were stated but not proved in the lower-level calculus sequence (unless we have previously proved these theorems in MAA 4211).

My *rough estimates* for the dates of the midterms are ?? and ?? *These dates are subject to change*. The actual dates will depend on our rate of progress. I will give you at least a week's notice before any exam.

The final exam will start at the day and time assigned us by the Registrar (Wed., Dec. 16, 3:00 p.m.).

Note: By registering for this section of this class, you are agreeing to be available for a final exam on Wed., Dec. 16, from 3:00 – 5:00 p.m. You are expected to arrange your post-semester travel plans accordingly, and are strongly advised to make those plans NOW. I will have little sympathy for students who state they are "unable" to take the final exam at its scheduled time, or that to do so would pose a hardship. If you voluntarily put yourself in this position, expect a zero for your final-exam grade.

Homework: There will be regular homework assignments. A subset of the exercises will be collected at intervals of one to two weeks. Do the homework when I assign it; if you procrastinate until the due-date is announced, you won't finish the homework in time. To help motivate you to do all the assigned problems, I will not announce which ones I am collecting until shortly before they are due.

The length and frequency of assignments will vary. Please see the homework page for rules concerning homework. This homework page is also where assignments will be posted, so you are responsible for checking it frequently.

It is impossible to overstate the importance of doing the homework.

Grading. The system I use in this class is based on the premise that some people put their best foot forward on homework and some do it on exams. It works as follows:

1. After each homework or exam, I decide a grade scale for that item according to the philosophy "A = excellent, B = good, C = satisfactory, D = unsatisfactory but passing". In setting these scales, I don't have a predetermined grade curve or predetermined percentages for letter grades.

2. At the end of the semester, I compute a numerical "raw score" for each student according to three different weighting schemes:

   - 20% each midterm (total 40%), 20% final, 40% homework;
   - 20% each midterm (total 40%), 40% final, 20% homework;
   - 15% each midterm (total 30%), 30% final, 40% homework.

3. By applying the same weighting schemes to the cutoffs for exams and homework, I construct three different sets of raw-score grade cutoffs. The homework assignments do not all count equally; longer assignments count more than shorter assignments.

4. Using these data, I obtain three letter grades for each student. The final grade I assign is the highest of these three.

   I think that the weighting schemes above are varied enough to allow every student a reasonable chance to show

me his or her best work, while at the same time not allowing anyone to completely throw away low scores that do, in fact, tell me something. If anyone has another reasonable weighting scheme he or she thinks should be on the list above, I'll consider it, provided it is presented to me early enough. If at the end of the semester, none of the above schemes is giving you the grade you want, that will not be a good enough reason for me to consider another scheme in which your best component is given inordinately high weight, and your worst component inordinately low weight.

More about grading. The grades that UF currently allows instructors to assign are A, A–, B+, B, B–, C+, C, C–, D+, D, D–, and E. (For grade-point equivalencies of these grades, see this catalog page.) All of these are grades are possible in this class, except possibly the D–.

In my approach to assigning minus-grades (the same as the approach used by my professors when I was in college), a B–, for example, is *not* the lower end of the B-range; it is *slightly but strictly below* the bottom of the B-range, and means that your work falls a little short of "good". (Said another way: another professor whose estimation of whether your work was satisfactory is the same as mine, but who regards B– as meaning "the low end of the `good' range", would *not* assign you a B–; he/she would assign you a C+.) This philosophy of what minus-grades mean is consistent with the degree-requirements for most majors at UF: courses that you've taken count only if you get a "flat" C or higher because a C– means that your performance was *less than* satisfactory—not that it was *barely* satisfactory—, and therefore that you did not satisfactorily complete the course. This philosophy is also consistent with UF's S-U grade option.

For similar reasons, I have never given the D– grade. "D" means "unsatisfactory but passing". I have always considered the next step down to be failing, which at UF is the E grade.

Since I don't determine the exam-grade cutoffs ahead of time, I can't tell you in advance exactly how many points you'll need to get a particular grade for the course. For examples of past grade-scales in my Advanced Calculus classes, navigate from my past classes page. **There is no guarantee that this semester's grade cutoffs will be close to those of the past classes**; they could be higher or lower. Also, if you are looking at several-year-old examples of my grade-scales, be aware that prior to Summer 2009 UF had a bizarre "plus-grades but no minus-grades" system that forced me to decide whether to assign, for example, a C+ or a B to someone who I thought deserved a B–, in which case I rounded up to a B. So the cutoffs that you see in my older classes for A, B, and C are approximately where I'd have set the cutoffs for A–, B–, and C– had these grades been assignable at the time, which would have made my class GPA's a little lower.

Attendance policy. Students are expected to attend every lecture, barring such things as illness, weddings, funerals, family emergencies, team activities, and religious holidays of which I am informed in advance. **Students who *choose* (for other reasons) not to attend class regularly are forfeiting the right to my help in office hours, including explanations of their mistakes on homework and exams.** Also be aware that the University of Florida Attendance Policies contain the following paragraph:

> *The university recognizes the right of the individual professor to make attendance mandatory. After due warning, professors may prohibit further attendance and subsequently assign a failing grade for excessive absences.*

I expect students to arrive *on time* and to pay attention for all 50 minutes of the period. Coming late to class is disruptive to both your instructor and your classmates. If a non-optional time commitment (e.g. a class the previous period in a distant location) will force you to be late on a regular basis, let me know at the start of the semester.

Students with a contagious illness are asked to exercise good judgment and to be considerate of their classmates and instructor when deciding whether to come to class. Coughing and sneezing in an enclosed space like a classroom or office is a wonderful way to spread germs.

Classroom decorum:

- Do not use your personal computer in class. Ditto for your cellphone, except to receive emergency alerts from UF. In particular, do not read or write text-messages in class. You may leave your phones in "vibrate" mode so that if UF sends an Emergency Alert, you will receive it. Note that in this case everybody's phone will be vibrating at the same time, so it will be obvious that something significant is happening. If *your* phone starts vibrating and nobody else's does, please ignore it. Cell-phone ringers, audible text-message alerts, etc., should be turned off while you are in class. (If you ever need me to make an exception to this rule, e.g. if you have a seriously ill family member, let me know before class starts.)

- Please avoid disruptive or distracting noises, such as the tapping of pencils or feet, or the zipping and unzipping of backpacks several minutes before the end of class.

Additional Information

What if you miss an exam? If you miss an exam for a valid reason, I will work out something with you that is as fair as is feasible. I almost never give make-up exams, because except in very large classes (which I don't teach) with cookie-cutter exams (which I don't give), there is no such thing as a fair make-up exam. To create a make-up exam that's not extremely unfair, either to the student taking it or his/her classmates, usually takes me at least six hours. Therefore, rather than a make-up exam, usually I will just give you a "bye" and simply re-adjust the weights of the other components of your grade.

If you are too ill to take an exam, you should notify me by phone or email before the exam starts, even if it's just a few minutes before.

Student Honor Code. UF students are bound by The Honor Pledge, which states:

> We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

The Honor Code (here) specifies a number of behaviors that are in violation of this code, and the possible sanctions. Furthermore, students are obligated to report to appropriate personnel any condition that facilitates academic misconduct. If you have any questions or concerns about student conduct, please consult your instructor.

Religious Holidays. The following is part of the University of Florida Policy on Religious Holidays. "Students, **upon prior notification of their instructors**, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith."

***Tentative, approximate* weekly schedule of lectures:** Click here. Students are expected to read the relevant material in the appropriate chapter-section of the textbook no later than the day after we cover that material in class. Preferably, students should do the reading earlier than that.

Accommodations for students with disabilities. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

Teaching-evaluations. Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

Goals of course:

- For the student to master the course-content.
- For the student to become accustomed to communicating mathematical ideas precisely and clearly, in written form.