Syllabus and course information

MAA 4212 — Advanced Calculus 2
Section 3009 (15179), Spring 2020
MWF 7th period, MAT 007

[Link to class home page](#)

Instructor : [Dr. David Groisser](#)

I receive a ton of email, so please be aware that:

- I won't answer math questions by email.
- **I don't answer email that lacks an *informative* subject line and the sender's full name.**
- I delete, without reading completely, any email that asks me to open an attachment whose nature or purpose I can't easily determine without opening.
- In general I answer students' emails **only on days that I normally have office hours, and only at certain times**. On office-hour days, I will generally respond to emails that arrive before the halfway mark of my office hour (or that arrived earlier, some time after my previous office-hour). For these emails, I will generally respond *during* my office hour if I have time left after I'm done seeing students, or *after* my office hour otherwise. *Exception*: I generally do not wait till the next office hour to respond to emails inquiring about (possible) typos in a homework assignment, or informing me of some problem with one of my course webpages.
- I never provide any grade information by email.

Office Hours: Tentatively Tuesday 6th period (12:50–1:40), Wednesday 8th period (3:00–3:50), and Friday 8th period (3:00–3:50). My office is Little Hall 308. 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 4.6–10 of Rosenlicht, but I may not stick religiously to the presentation in the text. General topics will include:

- uniform continuity (this is actually part of Section 4.4 in Rosenlicht)
- uniform convergence
- a careful treatment of differentiation of real-valued functions of a real variable
- a careful treatment of Riemann integration of functions of one variable

- differentiation of integrals depending on a parameter (differentiation under the integral sign")
- the Fundamental Theorem of Ordinary Differential Equations
- differentiation of multivariable functions
- the Inverse and Implicit Function Theorems
- multiple integrals (time permitting)

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, 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 Monday, February 10 and Friday, March 20. *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 be given Thursday, April 30, starting at 3:00 p.m., in our usual classroom. The date and time are set by the Registrar's Office; faculty members aren't permitted to change these.

Homework: There will be several homework assignments (probably six to eight). Because it is not physically possible for me to grade all the assigned problems, I will collect only a (proper) subset of the exercises. The hand-in exercises will be collected at intervals of one to two weeks. You should start on each homework problem within a day of its appearance on the homework page. 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 (within a day of the most recent class).

It is impossible to overstate the importance of doing *all* 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 weighting scheme.

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 the D–.

In my philosophy (and that of my own college professors) of what a minus-grade means, 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 how good your work was 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 is consistent with the degree-requirements for most majors at UF: courses count towards your major 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. (Because a C is usually needed for a course to count towards requirements for majors, minors, etc., an unfortunate number of faculty, advisors, and students have come to refer to every grade less than C as "failing". This is not the correct meaning of "failing grade", nor has it ever been; again see this catalog page.)

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.

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:

- As mentioned above, I expect you to pay attention for all 50 minutes of the period. Reading the newspaper, reading messages on your phone, looking at your computer, talking, texting, etc., are disruptive and rude.

- All audible alerts from your electronic devices should be turned off. (If you ever need me to make an exception to this rule, e.g. because of a family medical emergency, let me know before class starts.)

- Please also avoid all other 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, and supply me with satisfactory documentation by your next day back in class, I will work out with you some way that is as fair as is feasible for you to make up the missing grade-

component. 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. Thus, the way I have you make up the missing grade-component may or may not be via an exam. If you miss an exam for a reason that I do not consider valid (consistent with UF policy on which absences should be excused), or do not supply me with satisfactory documentation by your next day back in class, you should expect to receive a zero for that exam. If extenuating circumstances cause a reasonable delay in your providing me with satisfactory documentation, I may treat your exam-absence as valid and documented. (However, I will be the sole judge of what is "satisfactory", "extenuating", and "reasonable".)

If you are too ill to take an exam, please notify me by phone or email before the exam starts (if possible), 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 (which can be found 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. You 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, do the reading earlier than that.

Accommodations for students with disabilities. Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor, and discuss their accommodation needs, as early as possible in the semester.

Teaching-evaluations. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and

online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals or via ufl.bluera.com/ufl/. Summaries of course-evaluation results are available to students at gatorevals.aa.ufl.edu/public-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.
- To prepare the student for what will be expected of him or her in a graduate program in mathematics.

UF Health and Wellness Resources:

- **U Matter, We Care.** If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit umatter.ufl.edu/ to refer or report a concern, and a team member will reach out to the distressed student.

- **Counseling and Wellness Center.** Visit counseling.ufl.edu/ or call 352-392-1575 for information on crisis services as well as non-crisis services.

- **Student Health Care Center.** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit shcc.ufl.edu/.

- **University Police Department.** Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).

- **UF Health Shands Emergency Room / Trauma Center.** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; ufhealth.org/emergency-room-trauma-center.

UF Academic Resources:

- **E-learning technical support.** The UF Computing Help Desk can be reached at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

- **Career Connections Center.** This center, which provides career-assistance services and career-counseling services, is located in Reitz Union Suite 1300, and can be reached at 352-392-1601.

- **Library Support.** The website cms.uflib.ufl.edu/ask provides various ways to receive assistance with using the libraries or finding resources.

- Teaching Center. This center, located in Broward Hall, provides general study skills and tutoring, and can be reached at 352-392-2010. To make an appointment, call 352-392-6420.

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