

MAT 599, Senior Seminar in Mathematics, Spring 2015

Professor: Claudia Miller

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Course Web Page: <http://www.phy.syr.edu/~clamille/599.html>

Office Hours: By appointment, or whenever you can find me and I'm not busy.

Text: We will use various sources, tba. There is no official text.

Prerequisite: Permission of instructor.

Course Description: This course is the senior seminar on a topic or topics in mathematics, for students who are advanced and interested in mathematics. Obtaining a grade of A or A- in the course serves as partial fulfillment for Distinction in Mathematics.

Classes: The course will be run with substantial input from you:

- (1) Many class days will be seminar-style, with each student speaking in turn and the others participating actively with questions. To prepare, you will read portions of the texts, *working out fuller explanations of each paragraph*, as advanced math can be quite concise. In class, you will lecture in turns. We will go as slowly as necessary to understand each part fully. *The audience should ask about every little thing that is not clearly said. The speaker should make sure he/she does not lose the audience at any point. It takes some experience to realize how slowly one needs to go!*

It is also okay for the speaker not to have understood every part of the reading. Anything not understood should be worked out during the lectures by the audience and speaker jointly.

Most important: We should all shed *both* our egos *and* our insecurities for this joint work. We should ask anything we like, even many times; we should interrupt and correct anything, so that we get the fullest and best result out of the lectures. Everyone will get many things wrong; we can only progress by feeling comfortable enough to fail in front of each other.

- (2) On other days we will pause lecturing to develop the material further by working on problems in groups (both concrete examples and proofs). You will finish these and hand them in the next week.

Schedule: Although we may deviate from this, the usual class schedule will probably be:

- Lecturing on Mondays
- Working on problems on Wednesdays.

So your homework schedule will be:

- Prepare lecture notes for Mondays. Finish and write up previous week's problems by Wednesdays.

Grades: The final grades will be computed from the following (approximately equally):

- (1) The lectures (this includes your lecture preparations, your lecturing, and your participation in the audience during lectures), and
- (2) Your work on problems (this includes participation in group work and your homework).

Final Exam: There will be no final exam as this is a seminar class.

You should inform me **in the first two weeks of class** if

- (1) you have any disabilities for which special considerations are necessary, or
 - (2) you have any religious or sports commitments which may affect your attendance on any days of the semester.
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Students with disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Do not wait until just before the first test.

Academic integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>

Complete academic honesty is expected of all students. Any incidence of academic dishonesty, as defined by the SU Academic Integrity Policy, will result in both course sanctions and formal notification of the College of Arts & Sciences.

Religious Observances Policy: Syracuse University's religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.