

Syllabus for MAT 475 and 598, Student Teaching Seminar, Fall 2003

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Office Hours: (Tentative) Mondays and Tuesdays, 12:00 noon to 3:15 p.m. **Credits:** MAT 475 is a 3 credit course; MAT 598 is a 3 credit course in the Fall, and is a 0 credit no registration course in the spring. Should anyone need a different number of credits, please see the instructor to make the necessary arrangements.

Class Hours: To be determined.

Basic outline: The class will meet once before the start of classes on Monday, 08/25/2003 from 1:00 to 4:00 p.m. to discuss the basics of teaching and to prepare first time T.A.'s for their first class. Then we meet again on Wednesday 08/27/03, from 1:00 to 2:30 p.m., for training in the recognition of sexual harrasment. After that, we will meet weekly at a time convenient to everyone in the class, to discuss teaching problems that arise as the semester continues, and also to discuss the topics listed below. Also, each member of the class will have at least one classroom hour videotaped, and will then spend an hour with the instructor reviewing the videotape (see below).

First meeting, August 25, 2003: There is an outline of the necessary information entitled: PREPARATION FOR THE FIRST CLASS, which is appended to this document. The information in this outline will be discussed at the first meeting, which occurs before the start of classes.

Topics for Discussion I: The Relationship With Students

Getting the students involved: Group work, questions with written answers, blackboard work, others? Should you take attendance? Should you require the students to attend recitation? Should you pressure the students to attend recitation?

Respect: The need to demand it, and the requirement to give it. How friendly should one get with the students; can one simultaneously be friendly and sufficiently distant so as to command respect?

How do you learn mathematics: Do we all learn the same way? Do our students, who are generally not mathematics majors, learn mathematics the same way or ways that we do? Can we use our understanding of how we learn to help our students learn?

Emotion and metaphor: How can we convey our love of mathematics, and our enthusiasm for it to our students? How can we make mathematics real to our students?

Lecture vs. Recitation: What is the job of the recitation instructor as opposed to the job of the lecturer. What should you do if you feel that the students need you to lecture, or if the students ask you to lecture.

Preparation: Finding the right level of preparation for teaching the students how to solve problems; the need to think through the problem as you solve it in class; thinking on your feet and the need to feel confident; solving problems for them; giving hints.

Textbook: How should you use the textbook? Should you choose problems from the textbook, or make up your own for homework and /or quizzes? How should you advise the students as to how they should use the textbook?

Graphing calculators: Using them in class as a tool. Teaching the students how to use them. Teaching the students when to use them. Teaching the students to mistrust them (more generally: teaching the students that we all make mistakes; the art lies in discovering when you have made a mistake, and figuring out how to recover from it).

Control of your presence: Blackboard usage, voice control, emotion control, time control, etc.

Grading homework: The tension among: the need to require the students to do a reasonable amount of homework; the need to give the students feedback on how well they are doing; and the need for the TA to limit the amount of time spent on the job.

Making up and grading quizzes: Different ends require different techniques. The advantages and disadvantages of partial credit: sometimes it is important to have the right answer; sometimes it is important to have the right technique.

Proctoring exams: What to look for. What to do if you find cheating. What not to do if you find cheating.

Grading exams: Each course coordinator prepares a grading sheet at the time that the exam is made up, so each TA should have fairly clear guidelines as to how to grade each problem. What to do if there is ambiguity or error in the grading sheet (there almost always is).

The final exam will probably require two full days of grading, and you might be needed for the final meeting in which final grades are assigned. You should check with the course coordinator as to when you can leave campus before making plans for intersession or summer vacation.

Language problems: For some of the students, English is a second language, and it sometimes takes work to understand their questions, or to make your answers understood. For some of the students, American English is their only language and it sometimes takes work to convince them that "English is the Lingua Franca of the modern world", and that they must work to understand others.

Proper and improper relationships; sexual harrassment: You should have attended a seminar on this on Wednesday, August 27, 2003. If you missed this seminar, you should consult with the instructor as to how to make it up. We will also briefly review these topics.

Review sessions and exams: You should expect to be asked to conduct one or more special review sessions before exams. You should expect to proctor several of the uniform exams, and you should expect to spend most of the day after each midterm exam grading it.

Topics for Discussion II: Relationship with the Department

Coordination: Meetings; coordination via e-mail; recording and keeping grades; writing letters of recommendation; attending lectures.

Proper relationships; sexual and other harrassment: Your right to be treated respectfully; what to do if you feel that you are not being properly treated by your lecturer, course coordinator, or faculty member of the Department.

Supervision: You should find a course syllabus on the web before the first day of class. You should have a meeting, e-mail or in person, with the lecturer and/or course coordinator before the first class so that you have reasonable instruction as to what to do. You might be required to attend lecture, and there should be several meetings with the lecturer and/or course coordinator during the course of the semester.

Open classroom: You should expect your lecturer and/or course coordinator or other faculty members to visit your classroom; the first visit is supposed to occur during the first two weeks of class. There will

hopefully be at least one more visit later in the semester. One or more of these visits may be unannounced.

As part of its mandate to supervise the instruction under its auspices, the Department has the following requirement. The class of each recitation instructor must be visited at least once each semester by the corresponding lecturer, or course coordinator, or other faculty member if the lecturer is a graduate student. The visitor will generate a written record of his/her findings (the Department has a form for this purpose), and then meet with the TA soon after the visit to discuss these findings. The written record will be kept in the file of the TA. If the TA disagrees with some of the evaluative findings, he or she has the right to file a written rebuttal, which will also be kept in the file.

Videotaping: Each student in this course will be videotaped at least once during the semester. This visit will, in general, be arranged at the mutual convenience of the TA and the person doing the videotaping. The TA and the MAT 475/598 instructor will then watch the videotape together, so that the TA can see him/herself in action and can learn from it. The usual procedure is that no others are present during the session when the videotape is observed, but, the TA can request that others watch as well.

The purpose of the videotape is twofold. First, it gives the TA an opportunity to see herself or himself at work. This is necessary in order to enhance the TA's self-awareness. Second, the MAT 598 lecturer writes a short report, based on this videotape, stating the TA's strengths and weaknesses, and stating whether or not the TA is ready to go on to become a lecturer. While this report remains part of the TA's record, it is regarded primarily as advisory, rather than evaluative. In terms of evaluation, its only possible value would be to provide a baseline for future performance (How good a teacher you are when you first teach is not an interesting question; your eventual evaluation as a teacher will be based on observations made at the end of your career here.)

GUIDELINES FOR THE FIRST DAY OF TEACHING

I. PREPARATION

1. **Coordination.** Before the first meeting of your class, you should have met with the lecturer or course coordinator, and been given instructions as to what to do. If this does not happen, please inform Professor Sutherland and/or Professor Geller and/or Professor Maskit, and ask for instructions.
2. **Preparation for the first meeting.** You should have received instructions from your lecturer regarding what material to cover on the first day. If you have not received such instructions by the day before your first class, you should send your lecturer an e-mail message saying that you do not know what to do for the first class; send copies of this message to scott@math.sunysb.edu (Sutherland), bernie@math.sunysb.edu (Maskit) and daryl@math.sunysb.edu (Geller). In the worst case scenario, where you have received no guidance, look at the syllabus and, after attending to the details given below, start solving a problem from the text in the first section mentioned by the syllabus, and try to get some response from the students, to get their minds working in a mathematical track. Prepare a few problems for this purpose in advance; make sure you know how to solve these problems, but do not actually solve them beforehand.
3. **Syllabus.** Syllabi for all courses are, or should be, posted on the web; you can find the necessary link starting at www.math.sunysb.edu. As above, if there is no syllabus posted for your course, advise Professor Sutherland and/or Geller and/or Maskit as soon as possible.
4. **Text.** You should obtain a desk copy of the textbook from Barbara in the Undergraduate Office (P-143).
5. **Graphing calculators.** Some courses require them; some courses permit them; some courses prohibit them. You should get a clear statement from your course coordinator as to what is the policy for your course regarding graphing calculators. If your course requires them, then you should obtain one, along with an instruction booklet, from Barbara in the Undergraduate Office; you will have to leave a \$20 deposit.

If you are not familiar with the graphing calculator, and you need to use one, you should spend a

couple of hours playing with it to ensure that you can do the following.

- Graph elementary functions, with arbitrary ranges for both x - and y -axes.
- Do elementary numerical calculations involving rational functions, trig functions, logs to various bases, and exponentials.
- Write an elementary program, such as, for example, to compute the sum of the sines of the first 25 integers.

II. THE FIRST DAY OF CLASS

1. **Basic information.** Write your name, the title of the class and section number on the board; also your office number, e-mail address and office hours (you will be required to have at least two office hours, with at least one held in the Mathematics Learning Center in the Service Level of the Mathematics Building).
2. **Syllabi.** Remind the class that the syllabi are available on the web; they can follow the links starting at www.math.sunysb.edu. Read the relevant sections of the syllabus to the class (i.e., sections concerned with quizzes, homework, and other recitation material); also read aloud the section concerning disabilities.
3. **Voice control.** As you do the above, ask the students if they are comfortable with the parameters of your speech, and adjust the volume, speed and pitch of your voice so that everyone can hear you and is comfortable with your voice.
4. **Blackboard control.** Write down some crucial information concerning dates of quizzes, exams, etc., including date and time of the final exam (this info should be in the syllabus, and can be found in first few pages of the class schedule booklet). Check with the class to ensure that your writing is large enough so that they can see, and check the physical characteristics of the room to see if there are blind spots on the board; i.e., portions of the blackboard which are not visible from certain seats. If possible, make certain that there are no students seated in these seats, or, if that is not possible, do not write in these blind spots.
5. **Time control.** It is very important to be in control of the timing of the class. You should start on time and you should end on time. In order to do this, you should have a watch or other timepiece, so you always know what time it is, and so you can organize your class as it proceeds in such a manner that you end on time and in a good place.
6. **Attitude.** It usually takes several semesters of teaching to find the right attitude for yourself as a teacher, yet it is extremely important to have a good attitude on the very first day of class. On the one hand, you want to be reasonably friendly so that they feel comfortable asking questions in class and going to your office for help; on the other hand, you want to be reasonably distant and authoritative, so that the students treat you, and hence the class and the material you are teaching, with proper respect.
7. **Expectations.** You should be prepared with a written list of expectations of the students. How much time should they spend doing homework each week? Are they required to attend your class? Are they required to attend lecture? Will they be permitted to hand in homework late? If so, how late? Must they come to class to hand in homework? Will there be unannounced quizzes? Etc. You should read this aloud at the first meeting, and, if necessary, prepare a supplementary syllabus for your section containing this information; this supplementary syllabus can be prepared anytime during the first two weeks of class.
8. **Help for the students.** Tell them about your office hours; the Mathematics Learning Center (MLC); private tutors. Make sure that you know where the MLC is. Also, Barbara usually has a list of undergraduates and graduate students who wish to do private tutoring. You should note that, while the Department maintains a list of possible tutors for the convenience of the students, we do not recommend anyone, and we do not encourage students to go this route.
9. **Preparation exam.** There is a 0-level exam in the second week of class. In the fall semester, the exam is for MAT 125, 131 and 141; in the spring semester, it is for MAT 125 and 131. More info about this can be found at: <http://www.math.sunysb.edu/earlyexam/>. Note that calculators will not be permitted at this exam.

10. **Other exams.** You should know the dates and times of the other midterm exams, and the final exam. You should be able to tell the students about the calculator policy on your exams (permitted?, encouraged?, discouraged?, prohibited?) You should also tell them about the calculator policy on your quizzes and in your class while doing classwork. Some students might ask you questions concerning their need to miss one or more of these exams, and/or miss the final. **DO NOT TAKE ON YOURSELF THE RESPONSIBILITY OF ANSWERING SUCH QUESTIONS!** Refer the questions to the lecturer and/or course coordinator.
11. **Student information.** Ask the students to sign in; you will need to be prepared with paper for this. Have them write their name and whether or not they are registered for this course, and whether or not they are registered for your section. Also, their projected major or major interest. This information will be useful to you in choosing which problems to focus on in class.
12. **Headcount.** Count the number of students in the class, and ask for a show of hands as to how many are registered. record this information; you will need it for the Department administration.
13. **Academics.** If for any reason, you lack specific guidelines as to what to cover on the first day of classes, here are some general guidelines. If the students have already been to one lecture, go over some problems related to that lecture. If yours is the first class of the course, spend the time reviewing prerequisite material. This is especially true for MAT 125, 131 and 141, where there is a 0-level exam.
14. **Official paperwork.** Some number of students will approach you asking that you sign some paper giving them permission to enter or leave your section. **DO NOT DO THIS UNLESS** you have received specific instructions to do so from the course coordinator.
15. **Extreme versions of problems that you may have to face. IT IS VITAL TO YOUR SUCCESS FOR THE WHOLE SEMESTER THAT YOU HANDLE PROBLEMS SUCH AS THESE IN AN APPRIATE FASHION WHEN THEY FIRST ARISE.**
 - A student saunters into class half an hour late and loudly disrupts the class.
 - A student tells you that s/he is a graduating senior and needs this class to graduate, and that you must sign him/her in.
 - Two students loudly talk to each other while you are instructing.
 - A student gets up and walks out of the class while you are instructing.
 - A student is talking on a cell phone, or reading a newspaper while you are instructing.
 - A student complains loudly to the rest of the class that he cannot understand your accent.