

**MATH 880 PROSEMINAR
SCHEDULE #15202**

**JT SMITH
SPRING 2008**

Classroom	TH434	Office	MF 12:10–13:00
Class hours	MWF 11:10–12:00	Hours	W 14:10–15:00
Office	TH942		
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Internet	math.sfsu.edu/smith		no messages!

Prerequisites Background equivalent to an BA degree in mathematics, and concurrent work on a thesis or expository paper in mathematics.

Beyond that concurrent involvement, the course will require spurts of effort outside class to prepare brief oral reports and criticism and to exercise research and presentation methods.

Materials, computing Course information, including required and supplementary reading and a version of my notes, will be posted on my website, <http://math.sfsu.edu/smith/Math800/General/Math880.htm>. Already started, it will grow during the semester. I generally post material tentatively some time before it's covered in class, then revise it afterward as appropriate. Some parts of the website, particularly its bibliography, will be updated frequently. I'll ask for your email address, and use it to send important messages. That's how I correct errors in class and on my website. For this course and concurrent work, you'll need to use additional Internet sources and a good word processor with a formula editor. (I use *WordPerfect* with *MathType*. Most University computers feature Microsoft *Word*. *MathType* is free for our students.) You may need to use additional software, available in the Department, to produce visuals for presentations or graphics for inclusion in reports.

Overview The “measurable student outcomes,” phrased in bureaucratic language for accreditation, are listed at the end of this document.

Grading

Our MA program includes either a thesis, or two examinations and an expository paper. Math 880 will help students in either option.

First, it will provide experience in reading research and expository papers beyond the level of standard courses. I'll introduce one example for all of us, and each of you, *even before the course starts*, should ask a faculty member to suggest another paper.

You should *continue consulting* with faculty members to select your own thesis or expository paper topic. **IMPORTANT:** I can provide much help about writing, but *you* have to decide what to write *about*. Generally, I won't *supervise* your writing, but will serve as a *resource*.

We'll discuss how the mathematics literature is organized and how to find information in books and journals and online. Jointly and individually you'll be writing, presenting, and criticizing short expositions of some familiar mathematical topics, including some ideas beyond the standard courses.

We'll discuss and practice brainstorming, planning research, pursuing references, finding stories to tell, outlining, drafting, editing, reviewing with others, re-editing, re-re-editing, re-re-re-editing, We'll consider problems of graphics and typesetting. And you can gain experience presenting this material orally in class with computer assistance.

I'll spend considerable effort finding out what help you need and how to provide that efficiently, and working with you individually as well as in class. Throughout the term, you'll help each other by asking questions, discussing problems you encounter and solutions you find, and sharing—orally and in writing—your work in progress.

The goal of the course is for each of you, by the end of the term, to be well on the way to completing a thesis or expository paper. The course is graded CR/NCR; you receive CR by effectively helping us achieve that goal.

Pointers Some students may be very eager to present work under intense development at the end of the term. To provide for that, please keep this time free: Monday, 19 May, 10:45–13:15. It's officially part of the class schedule.

Please inform me if you have a disability that requires reasonable accommodation. The Disability Programs and Resource Center (Student Services Building, Room 110, 415-338-1041, drc@sfsu.edu), is available to facilitate that.

Reasonable accommodations will be made when observation of religious holidays requires you to be absent from course activities. Please inform me about that well in advance.

When you have difficulty with the course or related concurrent work, you should consult me during office hours. If you want to visit me, but can't then, I'll find another time to meet with you. I'll respond to most email queries, but please don't use that medium individually to ask me to repeat complex material that I have presented to the entire class at once. I intend to post on my website detailed outlines of all class meetings. Warning: my phone, 415-338-1623, is useful only when I'm physically in my office, TH942. *Don't* leave phone messages!

The Mathematics Computing Facility, TH404, will be open regularly for your use. Much useful software is installed on its PCs. Its operating hours will be posted as soon as they're arranged.

Mathematicians expect to receive credit when other scholars use our work, and in return we give credit to others whose work we use. We are extremely sensitive to and intolerant of plagiarism. For a discussion of plagiarism, consult the website

<http://online.sfsu.edu/~rone/StudentHelp/Plagiarism.html>.

Where you rely on work of others I expect you to give appropriate credit. I will help you learn to do that.

February 20 is the deadline for *adding* this course to your program, or *dropping* it, so that it will not appear on your record. All course *withdrawals* must be approved by me and the Mathematics Department Chair; withdrawal is recorded on your record. Withdrawal approval is *not* given after 28 April, except for withdrawal from the University, unless it's justified by events after that date. The College of Science and Engineering enforces such rules much more strictly than other parts of the University.

The Incomplete grade (I) may be assigned only to a student doing satisfactory work until the last few weeks of a course, when events beyond his or her control prevent its completion. If that happens to you, discuss this possibility with me.

Students whose electronic devices interrupt a class will be asked to leave.

“Measurable student outcomes,” phrased for accreditation review

1. *Analyze* the structure of a well-written published research or expository paper;
2. *Discover* information about an area of current or past research;
3. *Construct* bibliographic references and citations appropriate for publication;
4. *Brainstorm* a story line for a thesis or expository paper;
5. *Outline* an expository paper;
6. *Develop* computer visuals for a report about a research area;
7. *Present* an oral report about a research area, with visuals;
8. *Critique* a well-organized but poorly executed expository paper;
9. *Typeset* text including a variety of mathematical notation;
10. *Develop* graphics for inclusion in a typeset paper;
11. *Incorporate* graphics in a typeset text document.