

**MATH 300 HISTORY OF MATHEMATICS
SCHEDULE #28337**

**JT SMITH
SPRING 2009**

Classroom	TH428	Office	Tu 14:00–15:15
Class hours	TT 12:35–13:50	Hours (?)	Th 11:00–12:15
Office	Sci170B		
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Internet	http://math.sfsu.edu/smith		<i>no messages!</i>

Prerequisites Math 227, *Calculus II*, or equivalent; I will check it.

This course will require considerable computer work: Internet research and writing term papers. If you're adequately prepared for it and wish to succeed, you should plan to spend at least six hours a week on study, research, and writing for this class.

Materials, computing The course texts are *A Concise History of Mathematics*, by Dirk J. Struik; and *Peano: Life and Works of Giuseppe Peano*, by Hubert C. Kennedy. Our Bookstore stocks the first, a Dover paperback; the second is free from the Internet: <http://www.lulu.com/content/413765>. Several general histories of mathematics are on two-day library reserve in HSS102. Additional course information, including required and supplementary reading and a version of my notes, will be posted on my website. Follow the link displayed above. I'll use your email address @sfsu.edu to send important messages, including corrections of errors in class and on my website.

Overview This course will give you some experience in investigating the history of the topics in your other mathematics courses and those you may someday teach, and their relationships to the rest of the world. I'll tailor what I present to what you ask about, and hope the course will help you find answers to questions you've always wanted to ask! It will help you learn how to find information, to organize your investigations, and to present your findings. I'll emphasize topics according to my own interests and knowledge; the texts will introduce you to some others. The course will focus on the life of an influential and controversial scholar, Giuseppe Peano (1858–1932), all of whose mathematical work lies within your grasp. The main topics will appear in the order in which they occurred in his life and legacy:

- Elementary arithmetic, algebra, and geometry
- Calculus and advanced calculus
- Foundations of arithmetic and geometry
- Logic and its applications

Various aspects of academic and political culture played major roles throughout his story; we'll discuss those in detail as the course progresses.

Grading Your grade will be based on

- Two term papers of moderate length (12 pages?) 27% + 33%
- Very brief reports in class on questions you've investigated in connection with this course 10%
- Four quizzes on material from the texts and classes, 17 Feb, 17 Mar, 21 Apr, and 21 May (10:45–13:15) 6% + 7% + 8% + 9%

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

The deadline is 6 February for enrolling in this course and 20 February for *dropping*, so that it will not appear on your record. If you wish CR/NCR grading (not allowed for mathematics majors), you must request it via the Internet by 20 March. All *withdrawals* must be approved by me and the Mathematics Department Chair; withdrawal is recorded on your record. Withdrawal approval is ordinarily *not* given after 24 April (except for withdrawal from the University). The College of Science and Engineering enforces such rules more strictly than other parts of the University.

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. When you have difficulty with course material, you may consult me during office hours. If you can't then, we should be able to find another time to meet. 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 is useful only when I'm physically in my office. *Don't* leave phone messages!

Mathematicians expect to receive credit when other scholars use our work, and in return we give credit to others whose work we use. Much of the history of mathematics is about giving credit to our predecessors. Thus, historians of mathematics are extremely sensitive to and intolerant of plagiarism. For a discussion of plagiarism, consult the website

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

In a case of academic cheating or plagiarism, no credit will be given for the assignment in question. I expect the work you present to be your own. Where you use that of others I expect you to give appropriate credit. I will help you learn to do that

Students with disabilities who need reasonable accommodations should consult with me. The Disability Programs and Resource Center will help facilitate that: Student Services Building, voice/TTY 415- 338-2472, drpc@sfsu.edu, <http://www.sfsu.edu/~dprc/welcome.html>) will help facilitate that.

Reasonable accommodations will be made for you to observe religious holidays when that requires you to miss class activities. It is your responsibility to inform me during the first two weeks of class, in writing, about such holidays.