

MATH 151 - SYLLABUS

Calculus I

Fall 2008

Section	Professor	Day/Time	Location	Test/Review	Room	Time
1	Susan Goldstine	MWF 1:20	SH 109	W	SH 109	6pm
2	Susan Goldstine	MWF 9:20	SH 134	W	SH 111	6pm
3	Richard Stark	MWF 10:40	SS 123 (ARC)	W	SH 132	6pm
5	Patrick Corn	MWF 1:20	SH 165	T	SH 111	6pm
6	Patrick Corn	MWF 10:40	SH 134	T	SH 132	6pm

Text:

Single Variable Calculus (5th edition) by James Stewart.

Content:

This is the first of a two-semester sequence in differential and integral calculus. The semester is divided into five content periods, with the first four periods followed by a test and the fifth by a final exam. The four mid-semester tests will be administered during the evening review session.

Period 1: Sections 1.1–2.4: Review of functions, graphs, composition of functions, and trigonometric functions. Tangents and velocity, limits of functions.

Week of September 15: Test 1.

Period 2: Sections 2.5–3.5: Continuity, general rates of change. Derivatives of elementary functions, derivatives as functions, differentiation formulas, applications, derivatives of trig functions.

Week of October 6: Test 2.

Period 3: Sections 3.6–4.5: Chain rule, implicit differentiation, higher derivatives. Maxima and minima, the Mean Value Theorem, derivatives and graphs, limits at infinity, curve sketching.

Week of November 3: Test 3.

Period 4: Sections 4.7–5.3: Optimization, antiderivatives. Areas, the definite integral, the Fundamental Theorem of Calculus.

Week of December 1: Test 4.

Period 5: Sections 5.4–5.5: Indefinite integrals, integration by substitution.

Finals Week (December 15–18): Final Exam.

Classes: Class time will be a mixture of lectures, discussions, working problems, and group work. You should prepare for each class by reviewing the material already covered and by reading ahead in the text. In addition, you should work as many of the problems as possible—more than are assigned by your professor. In class, you should speak up with your questions and comments. If you need additional help, see your professor or your TA.

Extra Credit: You can earn a 1% increase in your grade by attending and writing a one page report on one of the NSM Colloquium talks. This can be repeated up to three times for a total of 3% extra before calculating your final grade. Talks are for a general audience of science majors in the areas of Mathematics, Computer Science, Biology, Chemistry and Physics. The lectures are in Room 106SH most Wednesdays at 4:40. A schedule of talks and weekly reminders will be sent to all students via email.

Attendance: You are expected to attend all classes (subject to the attendance policy outlined in the catalog). All varsity athletes should discuss possible conflicts with their professor, agree on resolutions, and sign the form provided by your coaches.

Make-Ups Exams: Make-ups will be allowed in emergency situations only. If at all possible, notify your professor of the emergency *prior* to the exam.