

Math 121—Spring 2005

Syllabus

Instructor: Rob Manning, rmanning@haverford.edu

Office: Hilles 207C (down a half-floor from the main math dept space), 896-1210

Office Hours (tentative): MT 1-3, WF 1-2, or arrange another time with me

Text: “Multivariable Calculus: Third Edition”, McCallum, Hughes-Hallett, Gleason, et al (Wiley, 2002)

Homework: Weekly problem sets due in class Wednesdays.

Late homework: I hope to begin grading each HW on the Wednesday afternoon it is due. However, if I don't, and if I receive your HW before I grade that assignment, I will not assign a grade penalty. Thereafter, there will be a 25% grade penalty, up until the exam that covers that material. If a solution set has been posted to Blackboard, you may not look at it until after you have submitted the late assignment.

Tests: Instead of HW on 2/16 and 3/30, there will be a test. The test will consist of a take-home part due on 2/16 or 3/30 as well as a short in-class portion taken on that day in class. There will also be a final exam, self-scheduled, during the final exam period.

Grades:	Homework : 20%
	Midterm Tests (2): 25% each
	Final Exam: 30%

Collaboration: For homework problems, discussion with other students in the class or with me is highly encouraged. The actual writing of the assignment should be done individually, without using notes from your collaborative discussions, so that you can be sure that it represents your personal understanding of the problems. To keep these guidelines clear, I would like to try a “reminder” system that other faculty have used. When you are working with someone, work on paper that you explicitly mark as “Collaboration” (and, similarly, if you are working on the blackboard, write that title on the board). Study these collaboration materials before you write up your assignment, make sure that you understand the ideas, and then get rid of them (or erase the board). If you can not write up the solution without using the collaboration material, then probably you have not yet understood the problem in full, and you should start the process again: get rid of your final solution, go back to discussions with fellow students and/or me, and try again later to write up the final solution on your own.

For the tests, no collaboration is allowed.

Blackboard: All assignments and solution sets (and perhaps some other stuff) will be posted on Blackboard.

Anticipated Schedule:

1/17–1/21	2D and 3D functions; Contour plots; Level curves/surfaces
1/24–1/28	Vectors; Dot and cross products
1/31–2/4	Partial derivatives; linear approximations
2/7–2/11	Gradient vector; Chain Rule
2/14–2/18	Taylor expansions; Local extrema
	2/16: Test # 1 (Part I due in class, Part II taken in class, on material 1/17–2/7)
2/21–2/25	Maximization/minimization
2/28–3/4	2D integration
3/7–3/11	Spring Break
3/14–3/18	3D integration; integration in polar coordinates
3/21–3/25	Integration in cylindrical or spherical coordinates; applications of integration
3/28–4/1	Parametrized curves and surfaces
	3/30: Test # 2 (Part I due in class, Part II taken in class, on material 2/9–3/21)
4/4–4/8	Vector fields; Line integrals
4/11–4/15	Path independence; Green’s Theorem
4/18–4/22	Flux integrals
4/25–4/29	Divergence & Stokes Theorems
	Final exam during final exam period