

Spring 2008

MATH 4250/6250 SYLLABUS

T. Shifrin

Text: T. Shifrin, *Differential Geometry: A First Course in Curves and Surfaces*, course notes available at Baxter Street Bookstore, 360 Baxter St, for \$11.35 (or available in .pdf form on my webpage).

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Web page for the class at

<http://www.math.uga.edu/~shifrin/MATH4250/MATH4250.html>

Office Hours: to be decided. They will be announced in class and posted on the web page.

The prerequisites for this class are MATH 2500 and MATH 3000 (or MATH 3500–3510), i.e., a solid knowledge of multivariable calculus and linear algebra. We will study the geometry of curves and surfaces in \mathbb{R}^3 , culminating in the Gauss-Bonnet Theorem (one of the crowning results of the early twentieth century) and a discussion of non-Euclidean geometry.

There will be two midterm exams (15% each), a final exam (30%), and nine graded homework assignments (40%). Homework will be collected approximately every third class. On each assignment, I will give a selection of problems, of which you must work five; typically I will specify one or two problems of central interest that everyone must do. Students who have completed MATH 4220/6220 will on occasion be asked to do a specific problem. Graduate students must do at least one “pyramid” problem on each assignment.

N.B.: No late homework or makeup exams. Although I encourage you to work on homework with a few other students, you **must** write up your assignments **by yourself**. You must comply with UGA’s Academic Honesty Policy; see particularly Sections 5, 7, and 8 at the website

http://www.uga.edu/honesty/ahpd/culture_honesty.htm

All students are responsible for maintaining the highest standards of honesty and integrity in every phase of their academic careers. The penalties for academic dishonesty are severe and ignorance is not an acceptable defense.

Midterm exams (covering approximately the chapters listed) are tentatively scheduled for

- Thursday, February 14, 2008 (Chapter 1) [Happy Valentine’s Day?]
- Tuesday, April 8, 2008 (Chapter 2)

and the comprehensive final exam will be Tuesday, May 6, 2008, 8:00–11:00 a.m.