Ma 109b
Yi NI
WI 2012-13 Course Description

Course description:
This is the second course in the 109 sequence, and is an introduction to differential geometry. The goal is to understand the differential geometry of curves and surfaces in three-dimensional space. This includes both local and global geometry. We will introduce basic geometric concepts as length, area, curvature and torsion. We will prove deep theorems like Gauss's Theorema Egregium and Gauss-Bonnet theorem. Other important subjects we will cover include geodesics and minimal surfaces.

Prerequisites: Ma 2.

Grading policy:
There will be a midterm and a final, each will be a take-home exam. The homework will count 40% of the final grade, while the two exams will each count 30%. All homework and exams must be turned in by 2pm on the due date in the marked box outside 253 Sloan. Except in unusual circumstances, homework will not be accepted more than a week late and at most one late homework set will be accepted. You should inform the instructor in advance if it is necessary to turn in homework late. Collaboration is allowed for the homework but not allowed for the exams.

Textbook:
Differential Geometry of Curves and Surfaces, Manfredo Do Carmo, ISBN: 0132125897