

# 120A

## Differential Geometry

**Instructor:** Peter Petersen, MS 6126.

**Office Hrs:**

**Time:** MWF 9-9:50am, TA section Tu 9-9:50am.

**Place:** MWF MS 5127, T PAB 2748

**Text:** Wolfgang Kühnel, Differential Geometry, Second Ed, AMS.

You might also find some of my notes useful

Lecture Notes for 120

**Prerequisites:** You must know the material from the entire calculus sequence 31A-33B. We shall use all of the material without reviewing it. In addition I assume that you have taken 115A and 131A. Several important items you should know are: Change of variables for functions of several variables, change of variables for multiple integrals, diagonalizing symmetric matrices (spectral theorem), the implicit function theorem, the inverse function theorem, Lagrange multipliers. Some of these basic concepts have been reviewed in Chapter 1 of the text.

**Contents:** Chapters 1,2,3, possibly 4.

**Homework:** TBD

**Exams:** There is going to be two one hour midterm and a three hour final. There will be no make-up exams unless you have an excuse that is officially sanctioned by UCLA.

**Exam Rules:** You are not allowed to use any electronic devices during the midterm or final, nor will these exams be open book. You are however allowed to bring a regular piece of paper with whatever information on it that you feel could be helpful.

**Grading:** Your grade will be weighted as follows: 10% homework, 20% midterm, and 50% final.

**Syllabus:**