General Information

Instructor:
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Office hours: Monday and Wednesday 4:00–5:00, and by appointment.

Text: Differential Geometry of Curves and Surfaces, by Manfredo P. do Carmo. This book is unfortunately out of print but a photocopy should be available at the University Bookstore.

About the course and prerequisites: This course, along with Math 443, is intended to be a concrete introduction to differential geometry. The emphasis will be on curves and surfaces in $\mathbb{R}^3$, although more abstract situations may be considered. You will need a working knowledge of multivariable calculus and a good knowledge of linear algebra, including vector spaces and linear transformations, to have a chance of success in this course. Although we will make little (if any) use of abstract topological spaces, you will need to have a good understanding of the point-set topology of $\mathbb{R}^n$. Finally, I will also assume that you have had experience in reading and writing proofs.

Homework: Homework will be assigned regularly and will require you to write careful proofs. It is expected to be demanding. Most of your homework will consist of problems from your text, but I may also write additional problems. Although you are encouraged to share ideas on homework problems with your classmates, I expect you to actually write your homework on your own. If you use sources other than the assigned text and your lecture notes to do the homework, you must reference them; otherwise you are committing academic fraud. I am well aware that solutions to many of the assigned problems can be found on the Internet. You are not permitted to use these to do the homework. In addition, you may not make use of any sort of discussion boards involving people outside the class for homework assistance. If you violate these rules on any homework assignment, you will receive a 0 on that assignment. I may also refer your case to the appropriate University committee on academic dishonesty. In principle, late homework will not be accepted.

Exams: There will be a midterm and a final exam. The midterm will be given in class and is tentatively scheduled for Wednesday, February 10. The final exam will be on Thursday, March 17 from 8:30–10:20. Absences from the midterm will
be dealt with on a case by case basis. Only under unavoidable emergencies (e.g.,
ilness, death in family) will you be allowed to miss an exam without penalty. Such
emergencies should be documented if at all possible. Note, however, that if you
take an exam you cannot claim illness as an excuse for doing poorly. In certain
other situations (e.g., athletic meets, family obligations), you may arrange to take
an exam early. This must, however, be set up well in advance and does not apply
to the final. (Do not make any arrangements to leave town before March 17.) I will
follow the procedures outlined in the Examination Guidelines (look under Academic
Calendar and Final Exam Schedule) in dealing with final exam absences.

Grading:

- Graded Homework: 20%
- Midterm: 30%
- Final: 50%

The grade of I (incomplete) will be given only under the conditions in the University of Washington General Catalog (under ”Grading Systems”).