

Math 240, Riemannian Geometry
Fall 2021
MWF2-3, 35 Evans
Instructor : John Lott
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Office hours : WF3-4 or by appointment

Required Texts : “Introduction to Riemannian Manifolds” by John Lee, Second Edition, Graduate Texts in Mathematics, Springer-Verlag (2018). An erratum is at

<http://www.math.washington.edu/~lee/Books/RM>

Also “Riemannian Geometry” by Peter Petersen, Third Edition, Graduate Texts in Mathematics, Springer-Verlag (2016).

Both books can be downloaded for free through the university library.

Material to be covered : Most of Chapters 2-12 of Lee’s book, omitting Chapter 9 and some sections. In the remaining time, we will cover some topics in comparison geometry from Petersen’s book.

There will be weekly homework assignments. Please do not work together on the homework.

During the reading week, each student will give a 30 minute talk on a topic of their choice related to the class. More about this later.

Prerequisite : Math 214 or equivalent. (Math 141 is not an adequate preparation.) If you are considering taking the class and are not sure if you have the prerequisites, please contact me.

Classroom atmosphere : Please do not use electronic devices (smartphones, laptops) during class, with the exception of using an iPad-like device to take notes.

Grading

70% homework, 20% talk, 10% attendance at talks.