

Instructor: Luca Spolaor, Office: AP&M 5111 (will not be there :))

Office Hours: W 3-5PM

Textbook: *Riemannian geometry*, by Manfredo Do Carmo

Website of the course: My page and Canvas

Email: lspolaor@ucsd.edu

Content of the class

Aim and content: We will study the notions of Differentiable Manifolds, Riemannian Metrics, Affine and Riemannian Connections, Geodesics, Curvature, Jacobi Fields, Isometric Immersions and Hopf-Rinow and Hadamard Theorems. This corresponds to Chapters 1-7 of Do Carmo. If time permit I will discuss some additional topics in preparation to the Topic Class I will teach in Winter on Minimal Surfaces.

Lecture: The Lectures will be live on Zoom. The link will be provided through Canvas and the recording will also be there.

Reading: As this is a Graduate Class, reading and autonomous work will be a fundamental part of it.

Lecture notes: I will post the handwritten notes after each class on Canvas, however they will not be a substitute for the book. Moreover they may contain errors or typos, use them at your own risk.

Homeworks, Exams and Grades

Problem Sets: There will be 5 homeworks, posted every 2 weeks on Canvas. They will not be graded and solutions will not be provided, since they are part of the final.

Final and Grades: The final exam will be an **oral exam on Zoom**. You will have to choose 5 problems from the homeworks, **one problem from each of the five homeworks**, and I will ask you **to present one or more of them**.

Academic Dishonesty: Academic dishonesty is considered a serious offense at UCSD. Students caught cheating will face an administrative sanction which may include suspension or expulsion from the university. See this website for more information.