Riemannian Geometry

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In this rather introductory course to differential geometry covers the following topics:

1. Definition and first examples of Riemannian manifolds

2. Connections, Geodesics

3. Hopf-Rinow Theorem

4. Riemann curvature tensor

5. Jacobi Fields

6. Bonnet-Meyers Theorem

7. Synge Theorem

8. Comparison theorems for triangles (Topogonov)

9. Classification of space forms

10. Classification of Surfaces