Math 162AB: Introduction to Differential Geometry

Text: *Differential Geometry of Curves and Surfaces*, Manfredo P. Do Carmo

Chapter 1
Chapter 2
Chapter 3-1 to 3-4
Chapter 4-1 to 4-5
If time permits, cover Chapter 3-5 or Chapter 4-6 and 4-7.

The punch line for the 2-quarter course is Gauss-Bonnet Theorem. The instructor should adjust the speed according to the level of the students. I recommend that the student should have a good understanding of linear algebra - the theoretical side rather than just matrix manipulation. Also, multi-variable calculus should be required (H2E or 140D)