485 Section 1 Tentative Syllabus/Calendar Field Spring 2014

For each day, read the listed section before class unless otherwise specified.

Monday	Wednesday
Jan 13 Plan for the Semester	**15** JMM (no class)
20 MLK Day (no class)	**23*** 1.1 Introduction 1.2 Arclength Parametrization
27 1.3 Frenet Formulas	**29** 1.4 Non-Unit Speed Curves
Feb 3 1.5 Some Implications of Curvature and Torsion	**5** Curves and Isometries
10 2.1 Introduction to Surfaces	**12** 2.2 The Geometry of Surfaces
17 BIG QUIZ 1 2.2 The Geometry of Surfaces	**19** SICK
24 2.3 The Linear Algebra of Surfaces	**26** 2.3 The Linear Algebra of Surfaces
Mar 3 SNOW	**5** 2.4 Normal Curvature
10 **SPRING**	**11** **BREAK**
17 2.4 Normal Curvature	**19** × 3.1 Introduction to Curvatures
24 **MIDTERM** 3.2 Calculating Curvature 3.3 Surfaces of Revolution	**26** **WEEK** 3.4 A Formula for Gauss Curvature 3.5 Some Effects of Curvature
31 3.6 Surfaces of Delaunay 3.7 Elliptic Functions, Maple and Geometry	**Apr 2** 5.1 Introduction to Geodesics, Metrics and Isometries 5.2 The Geodesic Equation and the Clairaut Relation
7 5.3 A Brief Digression on Completeness 5.4 Surfaces not in $\mathbb{R}^3$	**9** 8.1 Introduction to A Glimpse at Higher Dimensions 8.2 Manifolds Derivative
14 8.2 Manifolds 8.3 The Covariant Derivative	**16 BIG QUIZ 2** 8.4 Christoffel Symbols 8.5 Curvatures
21 Spacetime and Special Relativity	**23** Introduction to General Relativity
28 Curved Spacetime	**30** Geodesics and Spacetimes
5 **FINAL EXAM** 3:30-5:30pm	**6**

*January 21 drop deadline + January 30 late add deadline × March 21 course adjustment deadline