課　程　名　稱	（中文）微分幾何一 （英文）Differential Geometry (I)	
課程所屬領域 （　請　勾　選　）	□ 代數　□ 分析　□x 幾何　□ 離散 □ 統計　□機率或金融　□ 計算或應數	
課　程　規　劃 （　請　勾　選　）	□ 學年課 □ 學期課　：□x 上學期　□下學期	開課對象：□x 大學部 (senior undergraduate) 　　　□x 研究生
	上課時間：Friday 678	預估修課人數：

課程綱要：

I. Contents：

1. Differentiable and Riemannian manifolds.

2. Connection theory and curvature.

3. The Moving-Frame method (Geometry of submanifolds)

4. Comparison Geometry

5. Differential forms and de Rham cohomology.

II. Course Goal：

   Basic materials for differential geometry and geometric analysis

III. Course prerequisite：

Undergraduate geometry, basic linear algebra and analysis

IV. Reference material (textbook(s))：

1. J. Jost, Riemannian geometry and geometric analysis

2. M. do Carmo, Riemannian Geometry.

3. M. Spivak, Differential Geometry (5 volumes).

4. B.-Y. Chen, Geometry of Submanifolds.

V. Grading scheme：

   1. Home works

   2. Final reports