

Course Description

Department of Mathematics

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| Nature of the course <input type="checkbox"/> required <input type="checkbox"/> elective | | Area 麻煩老師勾選類別，或直接填寫_____。 <input type="checkbox"/> 代數與數論 <input type="checkbox"/> 分析 <input checked="" type="checkbox"/> 幾何與拓樸 <input type="checkbox"/> 計算與應用數學 <input type="checkbox"/> 機率 <input type="checkbox"/> 統計 <input type="checkbox"/> 離散數學 <input type="checkbox"/> 其他 <input type="checkbox"/> 論文研討、獨立研究 | | | |
| Calculus <input type="checkbox"/> Calculus A <input type="checkbox"/> Calculus B | | | | | |
| Course number | 221 U2930 221 U2940 | Section number | 免填 | Number of credits | 3 |
| Course title | 課程名稱：Differential Geometry (I),(II) | | | | |
| Instructor | 教授： Yng-Ing Lee | | | | |
| <p>I. * Contents :</p> <p>We will basically follow Petersen's book, but will also refer to Do Carmo's "Riemannian Geometry" and Cheeger and Ebin's "Comparison Theorems in Riemannian Geometry" whenever necessary. The class will start with manifold theory, tensor theory (curvatures and related), special examples, geodesic geometry, and sub-manifolds theory. Then follow with some important techniques such as comparison theorems and Bochner technique as well as other topics in geometry.</p> <p>II. Course prerequisite :</p> <p>Advanced Calculus and ODE</p> <p>III. * Reference material (textbook(s)) :</p> <p>Riemannian Geometry, Peter Petersen Springer Science, Graduate Texts in Mathematics,(Spring e-books)</p> <p>IV. * Grading scheme : 請填寫各項計分之百分比，例如：期中 30% 期末 40% 作業 10% 報告 20%，總計 100%</p> <p>Homework & Presentation 20%</p> <p>Mid-term 40%</p> <p>Final 40%</p> <p>V. * Course Goal :</p> <p>⊙ Set up the foundation for students to get into the field of geometry.</p> <p>⊙ Introduce the basics and essentials in Differential and Riemannian Geometry to students in all fields.</p> | | | | | |

1. *號為必填欄位

2. 大綱內容字數英文最少 200 字以上