

# Course Description

Department of Mathematics

Nature of the course <input checked="" type="checkbox"/> required <input type="checkbox"/> elective		Area 麻煩老師勾選類別，或直接填寫_____。 <input checked="" type="checkbox"/> 代數與數論 <input type="checkbox"/> 分析 <input 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			
Course number	免填	Section number		Number of credits	3
Course title	(中文) 代數 I, II (英文) Algebra I, II				
Instructor					
<p>I. Contents :</p> <p>Field extensions, fundamental theorem of Galois theory, computing Galois groups, Noetherian rings, Hilbert Nullstellensatz, completion, Hilbert polynomials, Maschke Theorem, induced representations, representations of <math>GL(2, q)</math></p> <p>II. Course prerequisite : Undergraduate algebra, linear algebra 康</p> <p>III. Reference material ( textbook(s) ) :</p> <p>Jacobson, Basic Algebra (I), Chapter 4, Jacobson, Basic Algebra (II), Chapters 5 and 7, Lang, Algebra (revised third edition, 2002), Chapters 5, 6, 9, 10, 18.</p> <p>IV. Grading scheme :</p> <p>Homeworks 20% Examination (twice) 60% Attendance 20%</p> <p>V. Course Goal : To understand Galois theory and field theory, representation of finite groups, basic commutative algebra</p> <p style="text-align: right;">教師簽名：康明昌 _____</p>					