課程大綱及進度表

開課系所	Math
開課學年	99
開課學期	2
課程名稱(中文)	線性代數（一）
課程名稱（英文）	LINEAR ALGEBRA(1)
課程碼	C111210
先修科目或先備能力	高中數學
學分數	3
開課教師	粘珠鳳
e-mail	nienpig@mail.ncku.edu.tw
電話	65146
Office Hours	By Appointment
課程概述	1: Vectors Spaces 2: Linear Transformations and Matrices 3: Elementary Matrix Operations and Systems of Linear Equations 4: Determinants
教學目標	Introduction to basic topics　and techniques in linear algebra.
授課課程大綱明細	**Chapter 1　Vector Spaces** 1.1　Introduction 1.2　Vector Spaces 1.3　Subspaces 1.4　Linear Combinations and Systems of Linear Equations 1.5　Linear Dependence and Linear Independence 1.6　Bases and Dimension 1.7*Maximal Linearly Independent Subsets **Chapter 2　Linear Transformations and Matrices** 2.1　Linear Transformations, Null Spaces, and Ranges 2.2　The Matrix Representation of a Linear Transformation 2.3　Composition of Linear Transformations and Matrix Multiplication

備註	2.4 Invitibility and Isomorphisms 2.5 The Change of Coordinate Matrix 2.6*Dual Spaces **Chapter 3 Elementary Matrix Operations and Systems of Linear** **Equations** 3.1 Elementary Matrix Operations and Elementary Matrices 3.2 The Rank of a Matrix and Matrix Inverses 3.3 Systems of Linear Equations---Theoretical Aspects 3.4 Systems of Linear Equations---Computational Aspects **Chapter 4 Determinants** 4.1 Determinants of Order 2 4.2 Determinants of order n 4.3 Properties of Determinants 4.4 Summary---Important Facts about Determinants 4.5*A Characterization of the Determinant
參考書目	Text book: Linear Algebra, Fourth Edition by S. Friedberg, A. Insel, and L. Spence (See http://math.illinoisstate.edu/linalg/www.html) Also, download free book at: http://www.math.brown.edu/~treil/ by Sergei Treil (for reference).
課程要求	
評量方式	Quiz and homework: 20% 2 midterms each counts for 25% Final: 30%
課程網址	http://www.math.ncku.edu.tw/~cfnien/11SLinear.html
助教資訊	
備註	