朝陽科技大學 095學年度第2學期教學大綱
Mathematic of Management 管理數學

當期課號	2247	Course Number	2247
授課教師	陳宏益	Instructor	CHEN,HUNG YI
中文課名	管理數學	Course Name	Mathematic of Management
開課單位	資訊管理系(四日)一C	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	1.以系統化程序將問題簡化,並建立各種管理模式,藉由模式探討問題 的特性,提出決策與解決的方法. 2.將問題轉換成數學模式,並以實際問題來作理論的推導與運用. 3.線性模式:矩陣運算 資料分析(線性迴歸模式)4.線性規劃模式 5.財務模式 6.陳述模式 7.機率模式 8.馬可夫鏈模式.	Objectives	1.Systematize the procedure for simplify the problems. 2.Describ the process of mathematical modeling. 3.Develop technique for analyzing models. 4.Linear models:Matrices and its operations. 5.Linear programming models. 6.Financial models 7.Presentation models.
教材	Kolman & Hill, Introductory linear algebra, 8th edition, Prentice Hall. 華泰文化代理. 註: 此書亦有中文翻譯版	Teaching Materials	Kolman & Hill, Introductory linear algebra, 8th edition, Prentice Hall.
成績評量方式	平時測驗 30 期中考 30% 期末考 35% 課堂參與 5%	Grading	Quizzes: 30% Mid-term: 30% Final: 35% Participating: 5%
教師網頁			
教學內容	教學目標: 培養基礎數學能力, 包含矩陣運算, 線性系統, 行列式以及矩陣固有值與固有向量，做爲日後作業研究及多變量分析等課程之基礎. 課程內容: Week 1. Ch1. Linear equations and Matrices 線性方程式與矩陣 Week 2. Ch1. Linear equations and Matrices 線性方程式與矩陣 Week 3. Ch12. MATLAB for linear algegra; Ch12.1~ch12.5 Week 4. Ch3. Determinants矩陣行列式 Week 5. Ch4. Vectors in Rn n維空間中的向量 Week 6. Ch4. Vectors in Rn n維空間中的向量 Week 7. Ch5 Applications of vectors in R2 and R3. 在二維與三維空間中向量的應用 Week 8. Ch6 Real vector spaces實數向量空間 Week 9. Ch6 Real vector spaces實數向量空間 Week 10.期中考 Week 11.Ch6 Real vector spaces實數向量空間 Week 12.Ch6 Real vector spaces實	Syllabus	Course objects: The course is to introduce the linear algegra and some of its applications. The course is a basis for advances applied mathematical courses, such as operation research, multivariate analysis, computer graph, and so on. Syllabus: Week 1. Ch1. Linear equations and Matrices Week 2. Ch1. Linear equations and Matrices Week 3. Ch12. MATLAB for linear algegra; Ch12.1~ch12.5 Week 4. Ch3. Determinants Week 5. Ch4. Vectors in Rn Week 6. Ch4. Vectors in Rn Week 7. Ch5 Applications of vectors in R2 and R3. Week 8. Ch6 Real vector spaces Week 9. Ch6 Real vector spaces Week 10.Mid-term examination Week 11.Ch6 Real vector spaces Week 12.Ch6 Real vector spaces Week 13.Ch6 Real vector spaces; Ch12.6 Vectors in MATLAB; Ch12.7 Applications of linear combinations in MATLAB

	數向量空間 Week 13.Ch6 Real vector spaces實數向量空間; Ch12.6 Vectors in MATLAB; Ch12.7 Applications of linear combinations in MATLAB Week 14.Ch7.1 QR-Factorization; Ch8 Eigenvalues, eigenvectors and diagonalization Week 15.Ch8 Eigenvalues, eigenvectors and diagonalization Week 16.Ch10 Linear transformations and matrices線性轉換與向量 Week 17.Ch10 Linear transformations and matrices線性轉換與向量; Ch12.8 Linear transformation in MATLAB Week 18. 期末考		Week 14.Ch7.1 QR-Factorization; Ch8 Eigenvalues, eigenvectors and diagonalization Week 15.Ch8 Eigenvalues, eigenvectors and diagonalization Week 16.Ch10 Linear transformations and matrices Week 17.Ch10 Linear transformations and matrices; Ch12.8 Linear transformation in MATLAB Week 18. Final examiniation

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