朝陽科技大學 099學年度第1學期教學大綱
Statistics 統計學

當期課號	1012	Course Number	1012
授課教師	李見發	Instructor	LI,JIAN FA
中文課名	統計學	Course Name	Statistics
開課單位	財務金融系(四日)二A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	課程主要目的在介紹各種統計觀念及方法,以及其在商業上的應用,使學生能正確地使用統計方法來解決許多商業上的問題。其主要內容如下：離散分配；連續分配；估計問題；信賴區間；假設檢定，簡單回歸。	Objectives	Introduction to statistical concepts and methods: descriptive statistics, probability, and distributions; inferences for means, variances, and proportions; and regression and correlation.
教材	必備: Statistical Techniques in Business and Economics, D. A. Lind, W. G. Marchal & S. A. Wathen , McGraw-Hill & Irwin , 14th edition.	Teaching Materials	Required: Statistical Techniques in Business and Economics, D. A. Lind, W. G. Marchal & S. A. Wathen , McGraw-Hill & Irwin , 14th edition.
成績評量方式	出席狀況 考試與作業平時 -30% 期中考- 30% 期末考- 40%	Grading	Attendence, Homework, Quiz, lecture notes- 30% Midterm Exam-30% Final Exam - 40%
教師網頁	-		
	Week 1 資料與統計--商業與經濟上的應用 資料; 敘述統計; 統計推論; 電腦與統計分析 Week 2 敘述統計I：表格與圖 定性資料的彙總; 定量資料的彙總 Week 3 敘述統計II：表格與圖 探究性資料分析：莖葉圖表示法; 交叉表格與散佈圖形法 Week 4 資料與統計II：數值方法 位置量數; 離散量數; 相對位置的量數與離群值的偵測 Week 5 資料與統計II：數值方法 探究性資料分析; 兩變數的相關性量數 加權平均數與群組資料的處理 Week 6 機率導論 實驗、計數法則 平時考(1) Week 7機率導論(I) 機率指派; 事件與事件機率; 機率的基本關係 Week 8機率導論(II) 條件機率; 貝氏定理 Week 9離散機率分配(I) 隨機變數; 離散機率分配; 期望值與變異數; 二項機率分配 Week 10離散機率分配(II) 卜瓦松機率分配; 超幾何機率分配 Week 11 期中考 Week 12 連續機率分配(I) 均勻機率分配; 常態機率分配 Week 13 連續機率分配(II)		Week 1 Data and Statistics: Applications in Business and Economics Data; Descriptive Statistics; Statistical Inference; Computers and Statistical Analysis Week 2 Descriptive Statistics: Tabular and Graphical Presentations (1) Summarizing Qualitative Data; Summarizing Quantitative Data. Week 3 Descriptive Statistics: Tabular and Graphical Presentations (2) Exploratory Data Analysis; The Stem-and- Leaf Display; Crosstabulations and Scatter Diagrams Week 4 Descriptive Statistics: Numerical Measures (1) Measures of Location; Measures of Variability; Measures of Distribution Shape; Relative Location; Detecting Outliers Week 5 Descriptive Statistics: Numerical Measures (1) Exploratory Data Analysis; Measures of Association between Two Variables; The Weighted Mean and Working With Grouped Data Week 6 Introduction to Probability(1) Experiments, Counting Rules, Quiz #1 Week 7 Introduction to Probability(2) Assigning Probabilities Events and Their Probability Week 8 Introduction to Probability (3) Some Basic Relationships of

教學內容	二項機率的常態分配近似值; 指數機率分配 Week 14 抽樣與抽樣分配(I) Electronics Associates的抽樣問題 平時考(2) Week 15 抽樣與抽樣分配(II) Electronics Associates的抽樣問題; 簡單隨機抽樣; 點估計; 抽樣分配簡介 Week 16 抽樣與抽樣分配 (III) p的抽樣分配 點估計量的性質; 其他抽樣方法 Week 17 區間估計 母體平均數：σ 已知; 母體平均數：σ 未知; 樣本大小的決定 母體比例 Week 18 期末考	**Syllabus**	Probability; Conditional Probability;Bayes' Theorem Week 9 Discrete Probability Distributions (1) Random Variables; Discrete Probability Distributions Expected Value and Variance; Binomial Distribution Week 10 Discrete Probability Distributions (2) Poisson Distribution; Hypergeometric Distribution Week 11 Mid-term Examination Week 12 Continuous Probability Distributions (1) Uniform Probability Distribution; Normal Probability Distribution Week 13 Continuous Probability Distributions (2) Normal Approximation of Binomial; Exponential Probability Distribution Week 14 Sampling and Sampling Distributions(1) The Electronics Associates Sampling Problem Quiz #2 Week 15 Sampling and Sampling Distributions(2) Simple Random Sampling; Point Estimation; Introduction to Sampling Distributions Week 16 Sampling and Sampling Distributions (3) Sampling Distribution of p; Properties of Point Estimators; Other Sampling Methods Week 17 Interval Estimation Population Mean: □ Known; Population Mean: □ Unknown; Determining the Sample Size; Population Proportion Week 18 Final Examination

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