朝陽科技大學 097學年度第2學期教學大綱
Calculus 微積分

當期課號	3022	Course Number	3022
授課教師	賴慶祥	Instructor	LAI,CHING HSIANG
中文課名	微積分	Course Name	Calculus
開課單位	財務金融系(四進)一A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	著重在積分的介紹與應用.此課程乃要幫助學生學會反導數,以及它的推導和應用.另外也要幫助學生學會並運用部分積分和重積分的工具,去解決複雜的積分問題.若時間許可,泰勒多項式和無窮級數也會包含在此課程中,因其在財務金融的領域上也是常被用到的工具.	Objectives	This course will involve introduction to integration, the method of integration, the application of definite integration, partial derivatives, multi-integration, and, if time allowing, differential equations and Taylor polynomials and infinite series.
教材	李英豪, 基礎微積分解析導引, 東華書局	Teaching Materials	李英豪, 基礎微積分解析導引, 東華書局
成績評量方式	期中考：30% 期末考：40% 小考：1~2次 合計 10% 作業：1~2次 合計 10% 出席：10% (每次缺席扣2分)	Grading	Midterm Exam：30% Final Exam：40% Quiz (1~2): 10% Homework (1~2): 10% Attendance: 10%
教師網頁	_		
教學內容	1. L'Hopital's Rule 2. Change of Variable in Integration 3. The Definite Integral 4. Fundamental Theorem of Calculus 5. Improper Integrals 6. Inverse Functions 7. Inverse Trigonometric Functions 8. Integration Formulas & Substitutions 9. Midterm Exam 10.Integration by Parts 11.Trigonometric Substitutions 12.Partial Fractions 13.Numerical Integration 14.Parametric Equations 15.Infinite Sequences and Applications 16.Convergence Tests for Series 17.Taylor's Series 18. Final Exam	Syllabus	1. L'Hopital's Rule 2. Change of Variable in Integration 3. The Definite Integral 4. Fundamental Theorem of Calculus 5. Improper Integrals 6. Inverse Functions 7. Inverse Trigonometric Functions 8. Integration Formulas & Substitutions 9. Midterm Exam 10.Integration by Parts 11.Trigonometric Substitutions 12.Partial Fractions 13.Numerical Integration 14.Parametric Equations 15.Infinite Sequences and Applications 16.Convergence Tests for Series 17.Taylor's Series 18. Final Exam

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