國立東華大學

課　　綱　Course Outline

理工學院大數據科學國際學士班學士班

中文課程名稱 Course Name in Chinese	微積分(二)				
英文課程名稱 Course Name in English	Calculus (II)				
科目代碼 Course Code	DS__10050	班 別 Degree	學士班 Bachelor’s		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					

課程目標
Course Objectives

Calculus provides a tool for solving problems involving motion. The derivative is useful in the study of rates of change of many entities. The definite integral also has many application in the sciences.

系教育目標
Dept.’s Education Objectives

1	訓練嚴謹思考與推理能力。 to provide a solid training in rigorous thinking and reasoning,
2	奠定資料科學理論與應用數學的基礎知識。 to establish well-founded background knowledge in data science and applied mathematics,
3	具備跨領域學習能力。 to prepare the students for interdisciplinary study in the future.

	系專業能力 Basic Learning Outcomes	課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.’s Education Objectives
A	具備基本資料科學知識及邏輯推理能力。 have well-founded background in data science and logical reasoning,	●
B	具備機率、統計、資料科學及相關領域的知識與應用能力。 have the knowledge of probability , statistics , data science and the related fields, and their applications,	●
C	具備資料科學應用技能與團隊合作，解決問題能力。 be able to utilize data scientific skills for problem solving through cooperation and teamworking.	○

圖示說明Illustration ：● 高度相關 Highly correlated ○中度相關 Moderately correlated
課程大綱 Course Outline
1.Improper integrals and Taylor formula. 2.Infinite series. 3.Polar coordinates. 4.Vector-valued functions. 5.Partial differentiation and Chain rule. 6.Double integrals.
資源需求評估（師資專長之聘任、儀器設備的配合・・・等） Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)
請應用數學系教師支援
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods
Lectures, discussions, homeworks, quizzes, midterm and final exams.
其他 Miscellaneous
1130306訂定