國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：周志隆

Instructor:CHOU CHIH LUNG

課程名稱：微積分(下)

Course Title：Calculus (II)

2026/11/3

課程代號： MB160B001 Course Code 學分數： 3 Credits	必選修：必修/全學年 Required/Electve:Required/Full Yr. 先修課程： Prerequisites
節次教室： Time/Location	F2(華夏恆毅樓D403) F3(華夏恆毅樓D403) F4(華夏恆毅樓D403) F6(華夏恆毅樓D403)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	1. Establishing Mathematical Thinking: This course aims to help students develop a foundational understanding of mathematical thinking and cultivate their ability to comprehend and apply mathematics. Students should learn how to engage in mathematical reasoning, analyze problems, and use calculus methods to solve relevant issues in management and economics. 2. Enhancing Analytical Abilities: Calculus serves as a crucial tool for analyzing problems and models. This course involves assisting students in grasping fundamental concepts such as functions, limits, derivatives, integrals, and enabling them to apply these concepts to solve mathematical and managerial problems in real-world contexts.
課程大綱： Outline of Lectures	W1: Integrals W2: Applications of Definite Integrals W3: Applications of Definite Integrals W4: Integrals and Transcendental Functions W5: Integrals and Transcendental Functions W6: Integration by Parts W7: Integration by Parts W8: Midterm Exam W9: Techniques of Integration W10: Techniques of Integration W11: Infinite Sequences and Series W12: Infinite Sequences and Series W13: Parametric Equations and Polar Coordinates W14: Vectors and the Geometry of Space W15: Introduction to First-Order and Second-Order Differential Equations W16: Final Exam
授課方式： Method of Instruction	講授 Lecture：75% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：25% 講授 Lecture：%

教科書： Textbooks	Thomas' Calculus (14th Edition), based on the original work by George B. Thomas, Jr., as revised by Joel Hass, Christopher Heil, Maurice D. Weir, Pearson, 2020.（高立）
參考書目： References	
修課須知： Notice	Exercise session is led by TA
評量方式： Grading	Midterm and final exams: 60% Homework and participation: 40%
備註說明： Notes	