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：鮑興國

Instructor:Hsing-Kuo Pao

課程名稱：微積分(下)

Course Title：Calculus (II)

2026/11/3

課程代號：CS161B001 Course Code 學分數：4 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	M6(TR-213) M7(TR-213) T3(TR-312) T4(TR-312) W10(TR-309)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	https://moodle2.ntust.edu.tw(https://ctld.webex.com/meet/pao)
課程宗旨： Course Objectives	The course is to provide an overall content to link between the calculus and other mathematics topics that were taught in high school and move forward. In particular, we cover some theoretical treatment like fundamental theorem of calculus, mean value theorem, chain rule, l'Hopital rule, integration by parts, to name a few. Some other topics like infinite sequences and series, partial derivatives, and multiple integrals will also be discussed, for at least the introductory items. After all, some applications of calculus in science and engineering will be studied too from time to time to build solid learning experience for students.
課程大綱： Outline of Lectures	1. Functions 2. Limits and Continuity 3. Derivatives 4. Applications of Derivatives 5. Integrals 6. Applications of Definite Integrals 7. Inverse Functions 8. Techniques of Integration 9. Infinite Sequences and Series 10. Special Topic I: Partial Derivatives 11. Special Topic II: Multiple Integrals 12. Applications of Calculus
授課方式： Method of Instruction	講授 Lecture：80% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：20% 講授 Lecture：%
教科書： Textbooks	THOMAS' CALCULUS, Based on the original work by GEORGE B. THOMAS, JR. as revised by JOEL HASS, CHRISTOPHER HEIL, MAURICE D. WEIR, 14th EDITION, Pearson, 2020.
參考書目： References	none

修課須知： Notice	TA will lead the tutorial class for discussion.
評量方式： Grading	20% Homework 40% Midterm 40% Final
備註說明： Notes	none