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：項人宗

Instructor:Jen-Tsung Hsian

課程名稱：微積分(下)

Course Title：Calculus (II)

2026/11/4

課程代號： IC114B001 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	M9(IB-408) R6(IB-408) R7(IB-408) T6(IB-408) T7(IB-408)
專業核心能力： Core Professional Competencies	■運用數學、科學及工程知識的能力。 ■具備程式設計能力與軟體開發基礎能力。 ■具備獨立思考、創新與解決問題能力
課程網址： Course Website	https://moodle2.ntust.edu.tw/course/view.php?id=18250
課程宗旨： Course Objectives	1. Introduce fundamental concepts of calculus, including power series and integration, as well as more advanced topics such as differential equations. 2. Apply these mathematical tools to physical systems of interest. 3. Guide students to formulate physical problems using calculus, analyze them systematically, and derive possible solutions. 4. Prepare students for the advanced mathematical techniques required in subsequent courses.
課程大綱： Outline of Lectures	1. 無窮數列與級數 2. 積分理論 3. 積分的應用 4. 積分技巧 5. 微分方程 1. Infinite Sequences and Series 2. Theory of integration 3. Applications of integrals 4. Techniques of integrations 5. Differential equations
授課方式： Method of Instruction	講授 Lecture：75% 分組討論 Group discussion：25% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	1. Thomas' Calculus: early transcendentals (SI unit), 14th global edition, 2. OpenStax Calculus, Vol 2 (it is free: https://assets.openstax.org/oscms-prodcms/media/documents/Calculus_Volume_2_-_WEB.pdf) 3. Lecture notes
參考書目： References	Publish or Perish - Calculus, 4th Edition, by Michael Spivak

修課須知： Notice	1. Meet every Tues: 01:20 AM~3:10 PM, and Thurs: 01:20 PM~03:10 PM 2. TA demo class: every Wed: 04:30 PM~05:20 PM -- (TA will make further announcement). TA will work out the additional examples, and Q&A for the homework problems.
評量方式： Grading	Homework: 30%, Presentations: 10%, Quiz: 10%, Exame: 50% (Final: 25%, Mid-term: 25%) no makeup exams!
備註說明： Notes	1. will have a quiz during the TA session roughly every two weeks 2. usually one HW per week 3. 60% of credits if the homework is past due