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：黃顗融

Instructor:Yi Long Huang

課程名稱：電力電子學

Course Title：Power Electronics

2026/11/3

課程代號： EE3203701 Course Code 學分數： 3 Credits	必選修：選修/半學年 Required/Electve:Elective/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	M6(IB-305) M7(IB-305) W2(IB-305)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	1.Steady-State Analysis of Switching Power Converter (Buck, SIMPLIS Tool) 2.Review of Linear Control and Bode Plot 3.Small Signal Modeling: Average Method Three-Terminal Circuit 4.Compensator Design (Voltage Mode), Voltage-Loop Stability 5.Magnetic Law, Magnetic Components 6.Isolated Converter: Flyback, Converter, Forward Converter
課程大綱： Outline of Lectures	1.Steady-State Analysis of Switching Power Converter (Buck, SIMPLIS Tool) 2.Review of Linear Control and Bode Plot 3.Small Signal Modeling: Average Method Three-Terminal Circuit 4.Compensator Design (Voltage Mode), Voltage-Loop Stability 5.Magnetic Law, Magnetic Components 6.Isolated Converter: Flyback, Converter, Forward Converter
授課方式： Method of Instruction	講授 Lecture：0% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	
參考書目： References	
修課須知： Notice	
評量方式： Grading	
備註說明： Notes	