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：林昌鴻

Instructor:Chang Hong Lin

課程名稱：數位邏輯設計

Course Title：Digital Logic Design

2026/11/3

課程代號： ET3305303 Course Code 學分數： 3 Credits	必選修：必修/半學年 Required/Electve:Required/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	T3(IB-502) T4(IB-502) W6(IB-305)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	1.Binary Systems 2.Boolean Algebra and Logic Gates 3.Gate-level Minimization 4.Introduction to Verilog HDL 5.Combinational Logic 6.Synchronous Sequential Logic 7.Registers, Counters, and Memory 8.Introduction to Programmable Logic Devices 9.Register Transfer Level 10.Asynchronous Sequential Logic
課程大綱： Outline of Lectures	1.Binary Systems 2.Boolean Algebra and Logic Gates 3.Gate-level Minimization 4.Introduction to Verilog HDL 5.Combinational Logic 6.Synchronous Sequential Logic 7.Registers, Counters, and Memory 8.Introduction to Programmable Logic Devices 9.Register Transfer Level 10.Asynchronous Sequential Logic
授課方式： Method of Instruction	講授 Lecture：100% 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	Digital Design with An Introduction to the Verilog HDL, VHDL, and SystemVerilog 6th edition, by M. Mano and Michael Ciletti, Pearson, 2018.
參考書目： References	N/A
修課須知： Notice	N/A
評量方式： Grading	Homework and Class Participation: 20% Midterm Exam: 35% Final Exam: 45%
備註說明： Notes	This course is intended to provide knowledge and understanding of digital logics and digital circuits, with concentration on the analysis and design of combinational and sequential logic circuits. Furthermore, this course provides a foundation for subsequent study in computer organization/architecture, digital system design, and VLSI design.