

Subject: **Digital System**

Instructor: **Cheng-Ying Yang, Ph.D.**

Meeting hours: Wednesday 9:10-12:00

Office hours: Tuesday 10:00-12:00, Thursday 10:00-12:00

Textbook:

M. Morris Mano and Michael D. Ciletti, *Digital Design*, 6<sup>th</sup> ed., Pearson Education Limited, 2019

Contents:

1. Binary number systems and codes
2. Boolean algebra functions and logic gates
3. Combinational logic design
4. Sequential logic design
5. Registers and counters
6. Memory and programmable logic design

Grading:

Midterm x2	25%
Final	35%
Participation, Assignment:	15%

Reference:

1. Charles H. Jr. Roth and Larry L. Kinney, *Fundamentals of Logic Design*, 7<sup>th</sup> ed., Cengage Learning, 2014
2. Peter J. Ashenden, *Digital Design An Embedded Approach Using VHDL*, Morgan Kaufmann, 2008
3. Charles H. Roth, Jr., *Digital Systems Design Using VHDL*, PWS Publishing Company, 1998.
4. Charles H. Roth, Jr., *Fundamentals of Logic Design*, 4th ed., PWS Publishing Company, 1995.
5. Daniel D. Gajski, *Principles of Digital Design*, Prentice Hall, 1997.
6. 葉勝年等，數位電路與邏輯設計(上)(下)，全華圖書，1982
7. 廖裕評、陸瑞強，CPLD 數位電路設計使用 MAX+plus II (入門篇)(應用篇)，全華圖書，2001