

Global Learning Semesters

Course Syllabus

Course: CENG-300A Digital Systems II

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
CENG-300A	Digital Systems II	3
Semester Offered	Contact Hours	Prerequisites
Please contact us	42-45	CENG 200
Department	Level of Course	Language of Instruction
Engineering	Upper Division	English

Course Description

This course is a continuation of Digital Systems I (CENG-200) and deals with the design of sequential logic circuits: programmable logic devices, counters, registers, memories, and interfacing (A-D and D-A conversion). The course is enriched with hardware description language (HDL) representation and simulation of the logic circuits and includes the design of embedded systems

Prerequisites

CENG -200

Topic Areas

1. Introduction to HDL.
2. HDL representation of combinational logic circuits.
3. Sequential circuit design.
4. Counters and registers.
5. HDL representation of sequential circuits.
6. Memories.
7. Interfacing (A-D and D-A conversion).
8. Embedded system design.

Readings and Resources

Required Textbook

- Morris M. Mano, Charles R. Kime, Logic and Computer Design Fundamentals, Second Edition, Prentice Hall, 2000 (ISBN: 0-13-016176-4).
- Thomas L. Floyd, Digital Fundamentals, Eighth Edition, Prentice Hall, 2003 (ISBN: 0-13-046411-2).

Recommended Reading

- D. Gajski, Principles of Digital Design, Prentice Hall, 1997 (ISBN: 0-13-301144-5).
- Garrod and Borns, Digital Logic Analysis, Application and Design, Saunders College Publ., 1991 (ISBN: 0-03-023099-3).