

Global Learning Semesters

Course Syllabus

Course: CENG-301 Digital Systems Lab

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
CENG-301	Digital Systems Lab	1.5
Semester Offered	Contact Hours	Prerequisites
Fall, Spring	42	EENG-121 Network Analysis I Lab, CENG-200 Digital Systems I. Introduction to electronic measurement techniques and instrumentation; fundamentals of digital logic gates, digital circuits and systems.
Department	Level of Course	Language of Instruction
Department	Upper Division	English

Course Description

Selected experiments examining logic devices and circuits to accompany and complement the lecture course CENG-300. The experiments include software simulation using XILINX (pre-lab) and hardware implementation. More specifically, use of VHDL and schematic design entry tools for the design, simulate, and implement digital systems such as multiplexers, counters, decoders, memories, ALU, etc., and hardware implementation and testing using FPGA's.

Instructor

Dr. George Gregoriou

Course Aims and Objectives

To allow students to experiment with combinational and sequential digital logic gates and circuits.

Teaching Methods

The course is delivered through laboratory experiments.

Course Teaching Hours

The course is 42 hours long and is delivered during in 14 weeks (3 hours/week in a 3-hour session).

Evaluation and Grading

Lab Reports: 40%
Lab Performance: 30%
Final Exam: 30%

Readings and Resources

Recommended Readings

- Thomas L. Floyd, Digital Fundamentals, Eighth Edition, Prentice Hall, 2003
- Morris M. Mano, Charles R. Kime, Logic and Computer Design Fundamentals, Second Edition, Prentice Hall, 2000
- Jerry V. Cox, Digital Experiments: Emphasizing Troubleshooting, Merrill Publishing Company, 1986