

Global Learning Semesters

Course Syllabus

Course: CENG-201 Digital Systems Lab

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
CENG-201	Digital Systems Lab	1.5
Semester Offered	Contact Hours	Prerequisites
Fall, Spring, Summer	42	EENG-121 Network Analysis I Lab. Introduction to electronic measurement techniques and Instrumentation.
Department	Level of Course	Language of Instruction
Engineering	Lower Division	English

Course Description

Selected experiments examining combinational and sequential logic devices and circuits to accompany and complement the lecture course CENG-200. Topics covered include binary numbers, basic logical operations, basic logic gates using discrete semiconductor components, logic probe and logic pulsar, CMOS logic gates - interfacing, logic gate characteristics, combinational logic design, S-R and D flip flops, J-K flip-flops, binary addition, code converters, and troubleshooting of digital systems. The experiments include software simulation (pre-lab) and hardware implementation.

Instructor

Dr. George Gregoriou

Course Aims and Objectives

To allow students to experiment with digital logic gates and circuits, and to design and troubleshoot digital logic circuits.

Teaching Methods

The course is delivered through laboratory experiments.

Course Teaching Hours

The course is 42 hours long and is delivered during the Fall and Spring semesters in 14 weeks (3 hours/week in a 3-hour session) and during the Summer session in 7 weeks (6 hours/week in two 3-hour Sessions).

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
- Jerry V. Cox, Digital Experiments: Emphasizing Troubleshooting, Merrill Publishing Company, 1986