COURSE DETAIL

DIGITAL LOGIC DESIGN
Country Egypt
Host Institution American University in Cairo
Program(s) The American University in Cairo
UCEAP Course Level Lower Division
UCEAP Subject Area(s) Electrical Engineering Computer Science
UCEAP Course Number 21
UCEAP Course Suffix
UCEAP Official Title DIGITAL LOGIC DESIGN
UCEAP Transcript Title DIGITAL LOGIC DESGN
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course covers the nature of digital logic and numbering systems. Topics include: Basic gates, Boolean algebra, Karnaugh maps, memory elements, latches, flip-flops, design of combinational and sequential circuits, integrated circuits and logic families, shift registers, counters, multiplexers, demultiplexers, decoders, encoders, and parity circuits, Number systems, 1's and 2's complements, arithmetic circuits, fixed-point and floating-point representations, memory types, design of circuits using ROMs and PLAs. The course involves exposure to logic design automation software and an introduction to FPGAs and HDL. Prerequisite: fundamentals of computing.

Language(s) of Instruction
English

Host Institution Course Number
ECNG 2101

Host Institution Course Title
DIGITAL LOGIC DESIGN

Host Institution Course Details
https://catalog.aucegypt.edu/preview_course.php?catoid=38&coid=90892&print=

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Electronics and Communications Engineering

Course Last Reviewed
2025-2026

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