Sample Brief Course Description	
Course title	Digital Electronics
Course code	ECE 345
College	Engineering
Department / Program	Biomedical Engineering
Year/ Level	4/7
Course Type	A. ☐ University ☐ College ■ Department ☐ Others b. ■ Required ☐ Elective
Credited Hours	4
Contact Hours	(LT: 3, LB: 4, TR: 0)
Pre-requisites (if any)	ECE 242
Co-requisites (if any)	---
Course description	The course includes Introduction to Digital Systems, Number Systems and Codes, Logic Gates, Boolean Algebra, Combinational Circuits, Sequential Circuits, Shift Registers and Counters, Programmable Logic, Memory and Storage.
Course Main Objectives	• Demonstrate a basic understanding of digital terminology, digital components, and systems. • Distinguish between digital and analog systems.

Learning Outcomes	**Knowledge and Understanding:---** 1. Explain the principles of analog-to-digital (AD) - and digital-to-analog (DA) conversion. 2. Describe the structure of a logic gate. 3. Explain the principles of programmable circuits. 4. Program a PLD type Field-Programmable Gate Array (FPGA).
	Skills:--- 1. Perform base 2, 8, 16 and BCD-code (binary-coded decimal) calculations. 2. Design a minimal combinatorial logic circuit that solves binary logical tasks. 3. Design a minimal sequential circuit that solves binary logical tasks. 4. Design synchronous networks with sequential flow charts.
	Values:--- 1. Communicate effectively and write lab report.