

**Faculty of Engineering & Technology**

**Logic Design**

**Information :**

**Course Code :** EED220

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Biomedical Engineering

**Description :**

Digital systems, binary numbers, and coded number systems. Boolean algebra, canonical and standard forms, and digital logic gates and their integrated circuits. Gate-Level Minimization, and the map method for simplification and implementation. Combinational logic circuits: Analysis procedure, design procedure, binary adder, subtractor, binary multiplier, magnitude comparator, decoders, encoders, and multiplexers. Sequential logic circuits: Latches and Flip-Flops, analysis of clocked sequential circuits, and design procedure. Registers, counters, Memory, memory decoding, and programmable devices. Selected applied design examples with standard integrated circuits (ICs).