

## Faculty of Engineering & Technology

### Computer Organization

#### **Information :**

**Course Code :** EED320

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Biomedical Engineering

#### **Description :**

Basic computer design and architecture: Design at the register transfer level, instruction codes, computer registers, timing and control, instruction cycle, memory-reference instructions, input-output, interrupt, and design of the accumulator logic, and arithmetic logic-shift unit. Memory Hierarchy (internal, external, and cache memory). Principles of hardware design using hardware description language, and design process of digital circuit simulation including special effects; circuit design, routing, delay, and meta stability. Design examples with field programmable gate array (FPGA) chips.