

The following learning targets represent the major concepts studied and assessed in this course.

## **Semester 1**

### **Unit 1: Foundations in Electronics:**

- Introduction to Electronics
- Introduction to Circuit Design

### **Unit 2: Combinational Logic:**

- AOI Combinational Logic Circuit Design
- Alternative Design: Universal Gates and K-Mapping
- Specific Combinational Logic Designs
- Introduction to Programmable Logic Devices (PLDs)

## **Semester 2**

### **Unit 3: Sequential Logic:**

- Sequential Logic Circuit Design
- Asynchronous Counters
- Synchronous Counters

### **Unit 4: Controlling Real-World Systems:**

- Introduction to State Machines
- Application of State Machines