**North South University**

**Department of Electrical and Computer Engineering**

**CSE231L – Digital Logic Design Lab**

**Lab Outline**

**Course Instructor:** Dr. Md. Abdur Razzak (Azz)

Professor

Electrical Engineering

Independent University Bangladesh

**Lab Instructor:**

Pritthika Dhar  
Email: [pritthika.dhar@northsouth.edu](mailto:pritthika.dhar@northsouth.edu)  
Contact Number: 01760083317

**Office Hours:**

Tuesday: 2:00pm - 04:00pm

**Office room:** LIB600(C3)

**\*For extra consultation hour, make an appointment through email.**

**Tentative Class Plan:**

|  |  |
| --- | --- |
| **Date** | **Name of Experiments** |
| 06/02/23 | Intro to the Class, Group Formation & Lab 1: Digital Logic Gates (Theory Part) |
| 13/02/23 | Lab 1: Digital Logic Gates |
| 20/02/23 | Lab 2: Universal Logic Gates and Boolean Functions |
| 27/02/23 | Lab 2: Universal Logic Gates and Boolean Functions |
| 06/03/23 | Lab 3: Combinational Logic Design (Canonical Form) |
| 13/03/23 | Lab 3: Combinational Logic Design (Canonical Form) + Lab 4 |
| 20/03/23 | Lab 4: Combinational Logic Design (K- Map) |
| 27/03/23 | Mid-Term (Tentative) |
| 03/04/23 | Lab 5: Binary Arithmetic |
| 10/04/23 | Lab 5: Binary Arithmetic |
| 17/04/23 | Lab 6: Introduction to Multiplexers and Decoders |
| 24/04/23 | Lab 7: Flip-Flop and BCD to Seven Segment Decoder |
| 01/05/23 | Holiday |
| 08/05/23 | Lab 8: Synchronous Sequential Circuits |
| 15/05/23 | Lab 8: Synchronous Sequential Circuits |
| 22/05/23 | Final Exam |
| 29/05/23 | Setup |
| 05/06/23 | Project + Viva |

**Mark Distribution:**

|  |  |
| --- | --- |
| **Category** | **Marks (in %)** |
| Attendance & Class Performance | 5 |
| Lab Report (groupwise)  & Simulation (Individual) | 20 |
| Project | 50 |
| Midterm Exam (Set Up) | 10 |
| Final Exam (Set Up) | 15 |
| Total | 100 |

**Lab Report Marks Distribution (20 Points):**

* **Cover Page-0.5**
* **Experiment Name-0.5**
* **Objective-0.5**
* **Apparatus-0.5**
* **Theory-1**
* **Circuit Diagram-1**
* **Experimental Procedure-1**
* **Results-2**
* **Question/Answer-4**
* **Discussion-3**
* **Data Sheet-1**
* **Simulation-5**

**\*Check the file - ‘Lab Report Instructions’ for further details.**