**COURSE OUTLINE**

**Course Code:** CSE 206

**Course Title:** Digital Logic Design Sessional

**Level/Term:** 2/1

**Section:** A & B

**Academic Session:** 2019-2020

**Course Teacher(s):**

|  |  |  |
| --- | --- | --- |
| **Name** | **Office/Room** | **E-mail and Telephone:** |
| [Dr. Abu Sayed Md. Latiful Hoque](https://cse.buet.ac.bd/faculty_list/detail/asmlatifulhoque) |  | [asmlatifulhoque@cse.buet.ac.bd](mailto:asmlatifulhoque@cse.buet.ac.bd)  01556346357 |
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| [Syed Md. Mukit Rashid](https://cse.buet.ac.bd/faculty_list/detail/mukit) | Room 214 | [mukit@teacher.cse.buet.ac.bd](mailto:mukit@teacher.cse.buet.ac.bd)  01511080315 |
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**Course Learning Outcomes (CLO):**

After undergoing this course, students should be able to:

1. Understand the basic components of a digital circuit.
2. Construct, analyze, and debug simple combinational and sequential circuits.
3. Apply Boolean algebra techniques to digital circuit analysis.
4. Design and troubleshoot a simple state machine.
5. Measure and record the experimental data, analyze the results, and prepare a formal laboratory report.

**Assessment**

1. Offline and Online: 60-70%
2. Attendance: 5-10 %
3. Quiz: 20-30%

**Text and Reference books:**

1. Digital Logic and Computer Design by Morris Mano
2. Digital Logic Design by Nelson
3. Datasheet of various relevant ICs
4. Problem specification documents provided by instructors

**Weekly Schedule:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week**  **#** | **Starting**  **Date** | **Topic** | **Tentative**  **Evaluation Mode** |
| 1 | 27 Feb | Introduction + Group Formation + Logisim Demonstration -1 | |
| 2 | 6 Mar | Basic Logic Gates | **Online** |
| 3 | 13 Mar | Boolean Algebra | Offline |
| 4 | 20 Mar | **SKIPPED** | |
| 5 | 27 Mar | K - Map | **Online** |
| 6 | 3 Apr | Comparator, Adder Subtractor | Offline |
| **LOCKDOWN** | | | |
| 7 | 22 May | **SKIPPED** | |
| 8 | 29 May | Multiplexer & Decoder | **Online** |
| 9 | 5 Jun | Encoder | **Online** |
| 10 | 12 Jun | Flip-Flops + Registers | Offline |
| 11 | 19 Jun | Basic Counters | **Online** |
| 12 | 26 Jun | Advanced Counter (Ring Counter/Sequence Counter/BCD Counter/Jhonson Counter/etc.) | **Online** |
| 13 | 3 Jul | Synchronous Sequential Circuit (Advanced UP-Down Counter/Sequence Detector/Electronic Voting Machine/Traffic Signal/etc.) | **Online** |
| 14 | 10 Jul | Asynchronous Sequential Circuit (Ripple Counter/Vending Machine/Digital Lock/Coin Recognizer/etc.) | **Online** |
| 15 | 24 Jul | QUIZ and/or VIVA | |