Military Institute of Science & Technology
Mirpur Cantonment, Dhaka

Department of Computer Science & Engineering

COURSE OUTLINE

Subject
Title: Digital System Design Sessional
Code: CSE-316
Credit Hour: 0.75
Contact Hour: 3 hr
Level-3, **Term-II**

Instructors
Name:
Assoc Prof Md Abdus Sattar
Asst Prof Sharifa Rania Mahmud
Lec Anika Binte Islam

1.0 Course Objectives:

1.1 To design different components of basic computer.

1.2 To understand and design microprocessor of basic computer.

2.0 Course Outcomes:

Upon completion of the course, the students will be able to:

2.1 Design different components of the microprocessor using the concept of computer system design.

2.2 Implement combinatorial and sequential system using simulation software.

2.3 Design and implement a customized microprocessor with special features and simulate it using simulation software with team presentation.

3.0 Text Books:

3.1 Microprocessor Data Handbook (Revised and enlarged edition)

3.2 Digital Logic and Computer Design- M. MORRIS MANO.

3.3 Digital Computer Electronics- MALVINO and BROWN.

4.0 Mapping of Course Outcomes (CO) and Program Outcomes:

Course Outcomes(CO) of the Course	Program Outcome (PO)											
	1	2	3	4	5	6	7	8	9	10	11	12
Design different components of the microprocessor using the concept of computer system design.								√				
Implement combinatorial and sequential system using simulation software.											√	
Design and implement a customized microprocessor with special features and simulate it using simulation software with team presentation.									√			

5.0 Distribution of Marks:

Category	Marks %
Project (ALU Design)	20
Project (4-bit Microprocessor)	20
Class Participation	10
Quiz	20
Viva	10
Report	10
Class Assessment	10
Total	**100%**

6.0 Distribution (Planning) of the Course Contents:

Week	Lecture	Topics	Remarks
1	lab 1	Introduction to digital system and software simulation, Home assignment (Shifter)	All
2+3	lab 2	Assessment on Shifter, Problem definition of Project: Design of an ALU	Grp-1 Grp-2
4+5	lab 3	Design submission and software simulation of ALU	Grp-1 Grp-2
6+7	lab 4	Final project submission of ALU with report, Problem definition of Project: Design of a 4-bit microprocessor	Grp-1 Grp-2
8+9	lab 5	Design submission of 4-bit microprocessor	Grp-2 Grp-1

10+11	lab 6	Hardware submission of 4-bit microprocessor without control unit, Full software simulation of 4-bit microprocessor	Grp-2
			Grp-1
12+13	lab 7	Final project submission of 4-bit microprocessor with report	Grp-2
			Grp-1
14	lab 8	Quiz test	All

Date: July, 2017

Signature(s) of the Instructors