

COURSE OUTLINE

Course Code: CSE 316

Course Title: Microprocessors, Microcontrollers and Embedded Systems Sessional

Level/Term: 3/1

Section: A & B

Academic Session: January, 2022

Course Teacher(s):

Name:	Office/Room:	E-mail and Telephone:
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Course Outline:

Laboratory works based on CSE 315.

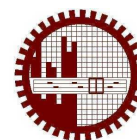
Learning Outcomes/Objectives:

After undergoing this course, students should be able to:

1. Understand and apply x86 instruction set (assembly language),
2. Implement hardware systems through interfacing different computing and memory components, and
3. Design and develop digital systems with a microcontroller, sensors, and/or actuators.

Text and Reference books:

1. ATmega Datasheet (Weblink: [ATmega32/L Datasheet](#))
2. Barry B Brey, The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, and Pentium Pro Processor Architecture, Programming, and Interfacing, 8th Edition



3. Douglas V Hall, Microprocessors and Interfacing Programming and hardware, 2nd Edition

Weekly schedule:

Week	Topics	Teacher's Initial
Week 1	Course Overview + Overview on Assembly	All
Week 2	Online 1 (Basic IO and arithmetic ops)	All
Week 3	Offline 1 declaration + Online 2 (Branching)	All
Week 4	Offline 1 evaluation + Online 3 (Loops)	All
Week 5	Experiment on ATmega32 Microcontroller: Basic I/O and Interrupt	All
Week 6	Experiment on ATmega32 Microcontroller: Led Matrix	All
Week 7	Project proposal submission (on microcontroller)	All
Week 8	Experiment on ATmega32 Microcontroller: ADC + LCD Display	All
Week 9	Project Update – 1 Demonstration (Circuit Diagram, Block Diagram)	All
Week 10		
Week 11	Project Update – 2 Demonstration (At least one working module)	All
Week 12	Quiz	All
Week 13	Project Final Submission	All
Week 14		

Prepared by :

All the instructors of CSE316 Jan 2021