GOVT. POLYTECHNIC MAYURBHANJ
LESSON PLAN

Discipline : Mechatronics Engg.		Semester: 4th		Name of the Teaching Faculty : MANOJ KUMAR PRADHAN
Subject :		Microprocessor and Micro Controller		
No. of Days / per week class allotted : 03				Semester From date : 22.12.2025 To Date : 18.04.2026
MONTH	Week	Day	UNIT	TOPICS
DECEMBER	Week 4	1st	1	Introduction to 8085 Microprocessor: Overview of Microprocessor Architecture and Basic Operations
	Week 4	3rd	1	Memory Organization and Input/Output (I/O) in 8085
	Week 5	5th	1	Microcomputer System and Interfacing Devices
	Week 5	1st	1	Basic Instructions and Programming Techniques with Additional Instructions
JANUARY	Week 1	3rd	1	Counters, Timing Delays, Stack, and Subroutines
	Week 1	5th	1	Code Conversion, BCD Arithmetic, 16-Bit Data Operations, Software Development Systems, and Assemblers
	Week 1	1st	2	8086 Microprocessor Architecture: CPU Pins and Signals
	Week 2	3rd	2	Operating Modes: Minimum Mode and Maximum Mode
	Week 2	5th	2	System Interrupt Configurations
	Week 3	1st	2	Bus Timing Diagrams: Minimum Mode
	Week 3	5th	2	Bus Timing Diagrams: Maximum Mode
	Week 3	1st	2	Overview of 8086 Architecture Integration and Applications
	Week 4	3rd	3	8086 Assembly Language: Instruction Set, Registers, and Flags (General Purpose, Pointer, Index, Segment Registers)
	Week 5	3rd	3	**CLASS TEST -1**
FEBRUARY	Week 1	5th	3	Addressing Modes: Program Memory and Data Memory Addressing Modes
	Week 1	1st	3	Addressing Mode Byte, Segment Override, and Memory Addressing Tables
	Week 1	3rd	3	Instruction Set Mnemonics, Assemblers, and Dependent Mnemonics
	Week 2	5th	3	8086 Instruction Groups and Programming Examples
	Week 2	1st	4	8051 Microcontroller Architecture Overview
	Week 2	3rd	4	Instruction Sets with Examples and Assembly Language Programs
	Week 3	5th	4	Timers and Counters in 8051
	Week 3	1st	4	Interrupts in 8051
	Week 3	3rd	4	Serial Port Programming
	Week 4	5th	4	Interfacing External Memory Devices with 8051 and Applications
	Week 4	1st	5	8085/8086/8051 Interfacing: Interfacing Peripherals (I/O's) and Parallel Input/Output Applications
	Week 4	3rd	5	Keyboard and Display Interface
MARCH	Week 1	5th	5	Interrupts Interfacing
	Week 1	1st	5	Data Converters and Programmable Interface Devices
	Week 2	5th	5	General Purpose Programmable Peripheral Devices
	Week 2	1st	5	Serial I/O and Data Communication
	Week 2	3rd	5	Microprocessor Applications in Interfacing
	Week 3	5th	6	Introduction to Arduino and Creating Arduino Programming Environment
	Week 3	1st	6	Arduino IDE and Creating an Arduino Program
	Week 3	3rd	6	Arduino Libraries
	Week 4	5th	6	Analog and Digital Interfacing
	Week 4	1st	6	Adding Interrupts in Arduino
	Week 5	3rd	6	Communicating with Devices and Sensors (Part 1)
APRIL	Week 1	1st	6	Communicating with Devices and Sensors (Part 2) and Arduino Applications
	Week 2	1st	7	Introduction to Raspberry Pi and Basic Functionality of the Board and Processor
	Week 2	3rd	7	Setting and Configuring the Raspberry Pi Board
	Week 2	5th	7	Programming on Raspberry Pi: Python Programming Environment
	Week 3	1st	7	Python Expressions and General Purpose I/O Pins
	Week 3	3rd	7	Protocol Pins, RPi.GPIO Library,Communicating with Devices and Sensors (Part 1 & 2) - Combined Session to Cover Remaining Content
	Week 3	5th	7	**CLASS TEST -2**