MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of Electronics Engineering

SEP 2023

Module Name: Computer Aided Control and Automation

Name of Module	Computer Aided Control and Automation
Name of Module Coordinator	Dr. R. P. Narwaria, Prof. D. K. Parsediya
Email and contact details of Module Coordinator	rpnarwaria@mitsgwalior.in 9301950530 parsediyadeep@mitsgwalior.in 8989474070
Objectives	To understand the basics of computer-based control system with designing of ladder logics for process control applications using PLC
content	Computer-based measurement and control systems, Basic components, Architecture and Hardware of computer-based process control system, Role of computers in process control, Human Machine Interface, Introduction to PLC, ladder logic, FBD, Various automation applications.
Mode of Delivery (online/offline/Blended)	Online/ Offline
Outcomes	Students will be able to ● Understand the fundamental principle of Computer based Control System. ● Design ladder logics of process control applications using PLC.
Drive link of Modules information video	https://drive.google.com/file/d/1e3geYSmp6bFEZJlhmlphJCwIjeuGJIi_/view?usp=sharing

Day Wise Schedule				
Computer Aided Control and Automation				
	Date	Day	Module Contents to be covered/ Interactive Session/ Assignment/ Quiz/ Exercises/ Daily practice sheets (DPP)/Tutorial/Project etc(10:00 AM onward, 2-3 Hrs/ Day)	Faculty
Week 1	17/05/2023	Wednesday	Basic control system terminology, Open loop and Closed loop system,	Dr. R. P. Narwaria

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			Feedback control	
	18/05/2023	Thursday	Transfer function of linear systems	Dr. R. P. Narwaria
	19/05/2023	Friday	Different test input signals, First order systems	Dr. R. P. Narwaria
Week 2	22/05/2023	Monday	Concept of stability of linear systems	Dr. R. P. Narwaria
	23/05/2023	Tuesday	Computer-based measurement and control systems	Dr. R. P. Narwaria
	24/05/2023	Wednesday	Basic components, Architecture and Hardware of computer-based process control system	Dr. R. P. Narwaria
	25/05/2023	Thursday	Role of computers in process control	Dr. R. P. Narwaria
	26/05/2023	Friday	Human Machine Interface, and Interfacing computer system with process	Dr. R. P. Narwaria
Week 3	29/05/2023	Monday	Introduction to Artificial Neural Network	Dr. R. P. Narwaria
	30/05/2023	Tuesday	Artificial Neural Network (ANN) Based Control	Dr. R. P. Narwaria
	31/05/2023	Wednesday	Controller design using neural network	Dr. R. P. Narwaria
	01/06/2023	Thursday	Introduction to Programmable logic Controller	Deep Kishore Parsediya
	02/06/2023	Friday	Automation through controller	Deep Kishore Parsediya
Week 4	05/06/2023	Monday	PLC I/O addressing	Deep Kishore Parsediya
	06/06/2023	Tuesday	Timers & counters	Deep Kishore Parsediya
	07/06/2023	Wednesday	Interfacing of sensors	Deep Kishore Parsediya
	08/06/2023	Thursday	Interfacing of Actuators	Deep Kishore

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				Parsediya
	09/06/2023	Friday	FBD for ladder programming	Deep Kishore Parsediya
Week 5	12/06/2023	Monday	Introduction to Software tool for ladder programming	Deep Kishore Parsediya
	13/06/2023	Tuesday	Hands on Session-I: Ladder programming,	Deep Kishore Parsediya
	14/06/2023	Wednesday	Hands on Session-II: Ladder programming,	Deep Kishore Parsediya
	15/06/2023	Thursday	Concluding Remarks by all Faculties	All faculty
	16/06/2022	Friday	Quiz	
Module Coordinators Email Id and Mobile Number	1) Dr. R. P. Narwaria – rpnarwaria@mitsgwalior.in (9301950530) 2) Prof. D. K. Parsediya – parsediyadeep@gmail.com, (898947070)			