



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - CYBER SECURITY

Lesson Plan & Work-done Diary for AY:2025-26, Even Semester

Course with Code: Microcontrollers and Embedded Systems – BCO601					Faculty: Mr. Chetan G		Semester & Section: 6 th	
Module	Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Date of Conduct ion (DD/M M)	Topics Covered	TLP Exec uted	Remarks if any deviation
MODULE-1	1		The RISC design philosophy	Power Point Presen tation (PPT) With projec tion				
	2		The ARM Design Philosophy, Embedded System Hardware					
	3		Embedded System Hardware					
	4		Embedded System Software, ARM Processor Fundamentals: Registers					
	5		Current Program Status Register					
	6		Current Program Status Register					
	7		Pipeline					
	8		Exceptions, Interrupts, and the Vector Table , Core Extensions.					



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MODULE-2	10		Data Processing Instructions	Power Point Presentation (PPT) With projection				
	11		Data Processing Instructions					
	12		Programme Instructions					
	13		Programme Instructions					
	14		Software Interrupt Instructions, Program Status Register Instructions, Coprocessor Instructions					
	15		Loading Constants					
	16		Writing Assembly code, Profiling and cycle counting					
	17		instruction scheduling, Register Allocation,					
	18		Conditional Execution, Looping Constructs.					





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MODULE-3	16		Embedded Vs General computing system, History of embedded systems	Power Point Presentation (PPT) With projection				
	17		Classification of Embedded systems, Major applications areas of embedded systems, purpose of embedded systems					
	18		Core of an Embedded System including all types of processor/controller					
	19		Memory					
	20		Sensors, Actuators, LED, 7 segment LED display					
	21		stepper motor					
	22		Keyboard, Push button switch.					





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MODULE-4	24		Characteristics and Quality Attributes of Embedded Systems	Power Point Presentation (PPT) With projection				
	25		Operational quality attributes, nonoperational quality attributes					
	26		Embedded Systems-Application and Domain specific					
	27		Automotive-Domain-Specific examples of embedded system					
	28		Fundamental Issues in Hardware Software Co-Design					
	29		Computational Models in Embedded Design					





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MODULE-5	32		Operating System basics, Types of operating systems	Power Point Presentation (PPT) With projection				
	33		Task, process and threads					
	34		Task, process and threads, Thread preemption					
	35		Multiprocessing and Multitasking					
	36		Task Communication					
	37		Task Communication					
	38		Task synchronization issues – Racing and Deadlock,					
	39		Concept of Binary and counting semaphores					
	40		How to choose an RTOS					
	41		Integration and testing of Embedded hardware and firmware.					
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	Activity	Planned	Actual	Remarks
1	Theory Classes	40		
2	Assignments/Quizzes/ Self study	3/5		
3	Tutorials/ Extra classes	0		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	100%		
Planning			Execution	
Faculty Signature: Mr. Chetan G			Faculty Signature: Mr. Chetan G	
HOD Signature:			HOD Signature:	

