

Course Code	Course Name	Course Outcomes	Details
8EC4-21	IOT Lab	CO1	Understand the concept of Internet of Things.
		CO2	Implement interfacing of various sensors with Arduino/Raspberry Pi
		CO3	Demonstrate the ability to transmit data wirelessly between different devices.
		CO4	Show an ability to upload/download sensor data on cloud and server.
		CO5	Examine various SQL queries from MySQL database.

Course Outcome	Program Outcomes (PO's)											
CO. NO.	Domain Specific					Domain Independent						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2				2							
CO2	2	2	2	2	2	2			2	2	1	2
CO3	2	2	2	2	2	2			2	2	1	2
CO4	2	2	2	2	2	2			2	2	1	2
CO5	2	2	2	2	2	2			2	2	1	2

1: Slight (Low) , 2: Moderate (Medium), 3: Substantial (High)

Course Code	Course Name	Course Outcomes	Details
7EC4-21	VLSI Design Lab	CO1	Understand the physical design process of Digital Integrated Circuits.
		CO2	Describe procedure for designing of programmable circuits.
		CO3	Demonstrate the ability to use various EDA tools for digital system design
		CO4	Implement various combinational and sequential circuits using VHDL on FPGA.
		CO5	Implement schematic and layout of various digital CMOS logic circuits using EDA tools.

Course Outcome	Program Outcomes (PO's)											
CO. NO.	Domain Specific					Domain Independent						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	2	2	1				2	1	2
CO2	2	2	2	2	2	1				2	2	1
CO3	2	3	2	2	2	2				2	2	2
CO4	2	2	2	2	2	1				2	2	1
CO5	2	2	2	2	2	2				2	1	2

1: Slight (Low) , 2: Moderate (Medium), 3: Substantial (High)

Course Code	Course Name	Course Outcomes	Details
7EC4-22	Advance Communication Lab (MATLAB Simulation)	CO1	Understand the features of an communication system and perform basic functions on signals.
		CO2	Explain various methods of generating and detecting different types of code words.
		CO3	Compute various digital communication parameters with the help of graphical representation.
		CO4	Implement fuzzy system and neural networks for different applications.
		CO5	Analyze the effects of sampling on a continuous time signal.

Course Outcome	Program Outcomes (PO's)											
CO. NO.	Domain Specific					Domain Independent						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	2	2				2	1		2
CO2	2	2	1	2	2				1	2		3
CO3	2	3	2	1	2				2	1		2
CO4	2	2	1	2	2				1	1		1
CO5	2	2	2	2	1				2	2		2

1: Slight (Low) , 2: Moderate (Medium), 3: Substantial (High)

Course Code	Course Name	Course Outcomes	Details
7EC4-23	Optical Communication Lab	CO1	Recall analog and digital link, propagation loss, numerical aperture for optical fiber communication.
		CO2	Sketch the characteristics of fibre optic LEDs, LDR and Laser Diode.
		CO3	Calculate the losses with and without OTDR.
		CO4	Analyze single mode, multimode fiber, optical waveguides, dispersion compensators, WDM, optical link power budget.
		CO5	Analyze the optical system performance using Eye diagram ,Q-factor & BER of optical signals

Course Outcome	Program Outcomes (PO's)											
CO. NO.	Domain Specific					Domain Independent						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	2					1	1	2
CO2	2	2	3	2	2					2	1	1
CO3	2	1	2	3	2					1	2	2
CO4	2	2	1	2	2					1	1	1
CO5	1	2	2	2	2					2	2	2

1: Slight (Low) , 2: Moderate (Medium), 3: Substantial (High)