Department of Electronics Engineering

Semester - VI

Unique Course Number: ELX601 Course Name: Embedded System and RTOS

Unique CO Number	Course Outcome (CO) Statement
EXC6631	Identify and describe various characteristics features and applications of embedded systems
EXC6632	Analyze and identify hardware for embedded system implementation.
EXC6633	Analyze and identify various software issue involved in embedded system for real time requirement.
EXC6634	Apply concepts of Real Time Operating Systems using C/C++ and implement real time kernel objects using RTOS "uC-OS/II"(Analysis)
EXC6635	Analyze and explain the design life cycle for embedded system implementation.
EXC6636	Select a specific embedded system as a case study and discuss fundamentals of design and development. (comprehension)

Unique Course Number: ELX602 Course Name: Computer Communication Network

Unique CO Number	Course Outcome (CO) Statement
EXC6551	Describe basics of communication networks and components used in network and layered architecture.
EXC6552	Explain physical layer and data link layer services and protocols.
EXC6553	Explain application layer protocols and QOS for the network.
EXC6554	Design network layer protocols.
EXC6555	Analyze transport layer protocols.
EXC6556	Analyze LAN protocol architecture.

Unique Course Number: ELX603 Course Name: VLSI Design

Unique CO Number	Course Outcome (CO) Statement
EXC6721	Demonstrate a clear understanding of choice of technology, MOSFET scaling.
EXC6722	Design and analyze circuit implementations in NMOS and static CMOS logic style.
EXC6723	Realize and evaluate performance of basic gates and circuits in different MOS circuit design styles.
EXC6724	Design semiconductor memory cells and implement memory arrays.
EXC6725	Design adders and multipliers and analyze tradeoffs in various implementations.
EXC6726	Assess and resolve VLSI clocking and system level design issues.

Unique Course Number: ELXDLO6022 Course Name: Electronics Product Design

Unique CO Number	Course Outcome (CO) Statement
EXC6641	Identify essential design procedures of electronic products.
EXC6642	Recognize essential production procedures of electronic products.
EXC6643	Design electronic products using user-centered designing processes.
EXC6644	Implement a prototype for meeting a particular requirement / specification
EXC66415	Demonstrate problem solving & troubleshooting skills in electronic product design
EXC66416	Prepare the relevant set of design documentation & present it as a case study

Unique Course Number: ELXDLO6023 Course Name: Wireless Communication

Unique CO Number	Course Outcome (CO) Statement
EXC6531	get familiarize with the concept of basic cellular communication system
EXC6532	see the use of concepts of mobile radio propagation
EXC6533	understand various cellular processes such as handoff strategies, interference, trunking theory
EXC6534	study the features and services of 2G cellular technologies: GSM & CDMA
EXC6535	study the features of evolving technological advances in 2G, 3G, 4G cellular systems.

Unique Course Number:ELXL601 Course Name: Embedded System & RTOS Laboratory

Unique number	LO statement
EXL6631	Write program using mixed C/C++ and Assembly language for real time embedded system.
EXL6632	Design system using peripherals for 8 bit /32 bit controller.
EXL6633	Analyze the real time operating system concepts using C Programming.
EXL6634	Develop a mini project to implement the concept of embedded system design

Unique Course Number: ELXL602 Course Name: Computer Communication Network Laboratory

Unique number	LO statement
EXL6521	Identify network hardware components.
EXL6522	Implement error control technique using turbo C.
EXL6523	Configure routers and switches.
EXL6524	Use TCP/IP utility commands.
EXL6525	Simulate transport layer protocols using network simulation software.
EXL6526	Simulate network layer software.

Unique Course Number:ELXL603 Course Name: VLSI Design Laboratory

Unique number	LO statement
EXL6721	Design, investigate and compare characteristics of NMOS and CMOS inverters.
EXL6722	Implement and analyze operation of logic gates and circuits in different MOS circuit design styles.
EXL6723	Implement and analyse operation of memory cell in CMOS technology.
EXL6724	Demonstrate expertise in use of various VLSI softwares in execution of mini projects.

Unique Course Number: ELXDLO6022 Course Name: Electronic Product Design Laboratory

Unique number	LO statement
EXL6641	To perform software testing using simulation
EXL6642	To perform Hardware testing using different instruments.
EXL6643	To design PCB and test the given circuit.
EXL6644	To prepare documentation of electronic product

Unique Course Number: ELXDLO6023 Course Name: Wireless Communication Laboratory

Unique number	LO statement
EXL6531	understand the fundamentals of mobile communication system
EXL6532	simulate the mobile communication parameters such as cluster size, signal to interference ratio and know the technical details of mobile stations.
EXL6533	know the details of mobile station using App 'G-Net Track Lite'
EXL6534	simulate the generation of CDMA transmission signal including information signal, PN sequence and DSSS signal
EXL6535	Simulation and generation of Gold sequence.
EXL65316	appreciate the emerging trends in mobile communication

Unique Course Number: ELXDLO6024 Course Name: Computer Organization & Architecture Laboratory

Unique number	LO statement
EXL6621	Implement basic arithmetic circuits using VHDL.
EXL6622	Calculate cache related metrics using Simulator.
EXL6623	Implement page replacement policies.
EXL6624	Analyze different type of Hazards.