Department of Electronics Engineering

Course Number: ELC601 Course Name: Basic VLSI Design

Unique CO Number	Course Outcome (CO) Statement
ELC6011	Demonstrate a clear understanding of VLSI Design flow, technology trends, scaling and MOSFET models.
ELC6012	Design and analyze MOS based inverters.
ELC6013	Understand different MOS circuit design styles
ELC6014	Apply design styles for realization of Combinational and Sequential Circuits
ELC6015	Understand various semiconductor memories using MOS logic
ELC6016	Design adder, multiplier and shifter circuits using MOS logic

Course Number: ELC602 Course Name: Electromagnetic Engineering

Unique CO Number	Course Outcome (CO) Statement
ELC6021	Remember vector calculus to static electric and magnetic fields in different engineering situations.
ELC6022	Recall Maxwell's equation in different forms (differential and integral) and apply them to diverse engineering problems.
ELC6023	Understand the phenomena of electromagnetic wave propagation in different media and in applications of microwave engineering
ELC6024	Discuss the nature of electromagnetic wave propagation through transmission lines.
ELC6025	Understand different antenna structures and Recall their applications.
ELC6026	Discuss the sources of EMI and identify methods to ensure compatibility as per existing standards for electrical and electronic systems.

Course Number: ELC603 Course Name: Computer Communication Networks

Unique CO Number	Course Outcome (CO) Statement
ELC6021	To list the functions of different network layers, protocols and components
ELC6022	To explain different protocols, standards and topologies and to understand the concepts of LAN networks
ELC6023	To apply different protocols and standards in understanding the architecture of the computer networks
ELC6024	To analyze different types of computer networks using addressing schemes ,routing strategies etc
ELC6025	To evaluate and compare the performance of computer networks
ELC6026	To design and simulate models of small scale computer networks

Course Number: ELC604 Course Name: Embedded Systems and Real Time Operating Systems

Unique CO Number	Course Outcome (CO) Statement
ELC6041	Identify and describe various characteristics features and applications of embedded systems
ELC6042	Select and Connect hardware for embedded system implementation.
ELC6043	Analyze and point out various software issue involved in development of an embedded system for real time requirement.
ELC6044	Apply concepts of Real Time Operating Systems using C/C++ and implement real time kernel objects using Free RTOS.
ELC6045	Analyze and explain the design life cycle for embedded system implementation.
ELC6046	Select a specific embedded system as a case study and demonstrate fundamentals of design and development.

Course Number: ELDO601 Course Name: Machine Learning

Unique CO Number	Course Outcome (CO) Statement
ELDO601	Develop Machine Learning Techniques which can be used in real world scenario.
ELDO602	Comprehend regression, classification that are used in machine learning
ELDO603	Apply different Dimensionality reduction and clustering methods that are used in machine learning.
ELDO604	Analyze Dimensionality reduction techniques.
ELDO605	Understand the working of Probabilistic models
ELDO606	Demonstrate understanding to real life problems

Department of Electronics Engineering

Course Number: ELL601 Course Name: Basic VLSI Design Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL6011	Develop circuits using SPICE / circuit simulators.
ELL6012	Design and analyze MOS based inverters.
ELL6013	Verify different MOS circuit design styles
ELL6014	Validate functionality of Combinational and Sequential Circuits using different design
ELL6015	Examine various semiconductor memories using MOS logic.
ELL6016	Enhance skills of building adder, multiplier and shifter circuits using MOS logic.

Course Number: ELL602 Course Name: Computer Communication Networks Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL6021	To identify network hardware components
ELL6022	To simulate error correction mechanisms in Data link layer
ELL6023	To study TCP/IP utility commands
ELL6024	To simulate network conditions and traffic using NS2
ELL6025	To evaluate and compare the performance of computer networks
ELL6026	To simulate packet analysis in the network

Course Number: ELL603 Course Name: Embedded Systems and RTOS Lab

Unique LO Number	Lab Outcome (LO) Statement
ELL6031	Assess use of mixed programming using C/C++ and Assembly language for real time embedded system.
ELL6032	Simulate traffic signal control system using AT89C51
ELL6033	Implement ARM Cortex peripherals functionality using embedded C.
ELL6034	Create a program to analyze the real time concepts.
ELL6035	Create a program to use Free RTOS for embedded system application.
ELL6036	Present any one real time embedded system to demonstrate the concept of embedded system design

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Course Number: ELL604 Course Name: Database Management Systems Lab

Unique LO Number	Lab Outcome (LO) Statement
ECL 3041	Design ER /EER diagram and convert to relational model for the real world application.
ECL 3042	Apply DDL, DML, DCL and TCL commands.
ECL 3043	Write simple and complex queries
ECL 3044	Use PL/SQL Constructs.
ECL 3045	Demonstrate the concept of concurrent transactions execution and frontend-backend connectivity

Course Number: ELM601 Course Name: Mini Project–2 B

Unique LO Number	Lab Outcome (LO) Statement
ELM6011	Identify problems based on research needs
ELM6012	Apply Knowledge and skill to solve societal problems in a group.
ELM6013	Draw the proper inferences from available results through theoretical/ experimental/simulations.
ELM6014	Analyze the impact of solutions in societal and environmental context for sustainable development
ELM6015	Use standard norms of engineering practices
ELM6016	Excel in written and oral communication.