Mahavir Education Trust's
SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
Affiliated to University of Mumbai, Approved by D.T.E. & A.I.C.T.E.| Awarded 'A' Grade by D.T.E., M.S. | Electronics Enginering Program Accreditated by N.B.A.,
New Delhi for 2 years w.e.f. 6ᵗʰ Aug.,2014 | Computer Engineering Program Re-Accreditated by N.B.A.,New Delhi for 3 yeas w.e.f. 1ˢᵗ July 2019 | Information Technology
Program Accreditated by N.B.A.,New Delhi for 3 years w.e.f. 1ˢᵗ July 2019

RINA
ISO 9001 Certified

Department of Electronics Engineering

Course Number: ELX601   Course Name: Embedded System & 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)

Course Number:ELX602   Course Name: Computer Communication Network

Unique CO Number	Course Outcome (CO) Statement
EXC6521	To list the functions of different network layers, protocols and components
EXC6522	To explain different protocols,standards and topologies and to understand the concepts of LAN networks
EXC6523	To apply different protocols and standards in understanding the architecture of the computer networks
EXC6524	To analyze different types of computer networks using addressing schemes ,routing strategies etc
EXC6525	To evaluate and compare the performace of computer networks
EXC6526	To design and simulate models of small scale computer networks

Course Number: ELXC603   Course Name: VLSI Design

Unique CO Number	Course Outcome (CO) Statement
ELXC6721	Recall different technology of Electronic Circuits
ELXC6722	Understand operation of MOS based different digital circuit
ELXC6723	Understand system level design issues
ELXC6724	Calculate different performance parameters of MOS based digital circuits
ELXC6725	Apply MOS based technique to determine different digital circuits
ELXC6726	Analyze static and dynamic characteristics of MOS based digital circuits

Course Number:ELX604   Course Name: Signals & Systems

Unique CO Number	Course Outcome (CO) Statement
EXC6411	Describe continuous and discrete time signals analytically and graphically.
EXC6412	Differentiate between continuous time and discrete time signals and systems
EXC6413	Apply frequency domain techniques for analysis of continuous time signals and systems
EXC6414	Apply frequency domain techniques for analysis of discrete time signals and systems
EXC6415	Analyze continuous and discrete time signals and systems in time domain.
EXC6416	Analyze continuous and discrete time signals and systems in frequency domain

Course Number: ELXDLO6023   Course Name: Wireless communication

Unique CO Number	Course Outcome (CO)

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, trucking theory.
EXC6534	study the architecture of GSM and analyze the features and services of 2G cellular technologies: GSM
EXC6535	study the architecture of CDMA and compare w.r.t GSM.
EXC6536	Analyze the evolving technological advances in 2G, 3G, 4G cellular systems.

Course Number:ELXDLO6024   Course Name: Computer Organization and Architecture

Unique CO Number	Course Outcome (CO) Statement
EXC6621	Describe various organization and performance matrix of computer system
EXC6622	Explain design consideration of computer system
EXC6623	Understand and analyze various issues related with computer organization
EXC6624	Demonstrate the features of computer organization

EXC6625	Analyze the features of computer organization
EXC6626	Explain various architectural enhancements in modern processor.

LO STATEMENTS

Course Number: ELXL601   Course Name: Embedded System & RTOS

Unique LO Number	Lab Outcome (LO) Statement
EXL6631	Assess use of mixed programming using C/C++ and Assembly language for real time embedded system.
EXL6632	Simulate traffic signal control system using AT89C51
EXL6633	Implement ARM Cortex peripherals functionality using embedded C.
EXL6634	Create a program to analyze the real time concepts .
EXL6635	Create a program to use uC/ OS-II for embedded system application.
EXL6636	Develop a mini project to implement the concept of embedded system design

Course Number: ELXL602   Course Name: CCN Laboratory

Unique LO Number	Lab Outcome (LO) Statement
EXL6521	To identify network hardware components
EXL6522	To simulate error correction mechanisms in Data link layer
EXL6523	To study TCP/IP utility commands
EXL6524	To simulate network conditions and traffic using NS2
EXL6525	To simulate configuration of routers and switches

EXL6526	To simulate packet analysis in the network

Course Number: ELXL603   Course Name: VLSI Design laboratory

Unique LO Number	Lab Outcome (LO) Statement
ELXL6721	Recall MOS based different digital circuit
ELXL6722	Understand operation of MOS based different digital circuit
ELXL6723	Apply concept of MOS technique to draw different digital circuit
ELXL6724	Demonstrate MOS based different digital circuit for DC and Transient analysis
ELXL6725	Analyze different MOS based digital circuits for DC and Transient analysis
ELXL6726	Measure circuits performance parameters and verify functionality of different MOS based digital circuits

Course Number: ELXL DLO6023   Course Name: Wireless communication laboratory

Unique LO Number	Lab Outcome (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	Find out transmission parameters of CDMA station
EXL6534	Appreciate the emerging trends in mobile communication

EXL6535	Design the CDMA systems.

Course Number:EXC662   Course Name: Computer Organization and
Architecture Laboratory

Unique LO Number	Lab Outcome (LO) Statement
EXL6621	Simulate basic arithmetic circuits using VHDL.
EXL6622	Calculate cache related metrics using Simulator.
EXL6623	Describe page replacement policies .
EXL6624	Analyze different types of Hazards.
EXL6624	Create a program to use features of computer architecture
EXL6624	Prepare documentation on computer organization and architecture.