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 Accredited by N.B.A.,New Delhi for 3 years w.e.f. 1ˢᵗ July 2019

RINA
ISO 9001 Certified

Department of Electronics Engineering

Semester - V

Unique Course Number: ELX501   Course Name: Microcontroller Applications

Unique CO Number	Course Outcome (CO) Statement
EXC5611	Describe architecture and instruction set of 8051
EXC5612	Write program and interface peripheral devices with 8051
EXC5613	Describe architecture and instruction set of ARM7TDMI
EXC5614	Write program in assembly and embedded 'c' for ARM7TDMI

Unique Course Number: ELX502   Course Name: Digital Communication

Unique CO Number	Course Outcome (CO) Statement
EXC5511	Comprehend the advantages of digital communication over analog communication and explain need for various subsystems in Digital communication systems
EXC5512	Realize the implications of Shannon-Hartley Capacity theorem while designing the efficient Source encoding technique.
EXC5513	Analyze various Digital modulation methods and assess them based on parameters such as spectral efficiency , Power efficiency, Probability of error in detection
EXC5514	Understand the impact of Inter Symbol Interference in Baseband transmission and methods to mitigate its effect
EXC5515	Explain the concept and need for designing efficient Forward Error Correcting codes
EXC5516	Realize the areas of application of Digital communication.

Unique Course Number: ELX503   Course Name: Engineering Electromagnetic

Unique CO Number	Course Outcome (CO) Statement
EXC5031	Explain basic laws associated with Electric & Magnetic fields & Maxwell's Equations.
EXC5032	Analyze the behaviour of Electromagnetic waves in different media.
EXC5033	Apply computation techniques to analyze electric field distribution.
EXC5034	Evaluate the various parameters of transmission lines and radiating systems.
EXC5035	Explain different mechanism of radio wave propagation.

Unique Course Number: ELX504   Course Name: Design with Linear Integrated Circuits

Unique CO Number	Course Outcome (CO) Statement
EX5341	Describe the fundamentals of operational amplifiers and its parameters
EX5342	Discuss the linear and non linear applications of op-amp and some of the applications of special purpose Ics like 555,565,723.
EX5343	Solve numerical based on design of op-amp and special purpose ICS.
EX5344	Create different application circuits using the design knowledge of op-amp and special purpose ICs.

Unique Course Number: ELXDLO5011Course Name: Database and Management System

Unique CO Number	Course Outcome (CO) Statement
EXC51021	Explain fundamentals of DBMS.
EXC51022	Design and Draw ER and EER diagram for real life problem
EXC51023	Convert conceptual model to relational model and formulate relational algebra queries
EXC51024	Design and Querying database using SQL.
EXC51025	Analyse and Apply concept of normalization to RDBMS design.
EXC51026	Explain concept of transaction, concurrency and recovery.

Unique Course Number: EXC506 Course Name: Business Communication Ethics

Unique CO Number	Course Outcome (CO) Statement
EX5931	Achieve the ability to write technical proposal and reports
EX5932	Apply interpersonal skills in personal and professional life
EX5933	Identify the problems in oral communication for life-long learning
EX5934	Prepare for employability with right approach t corporate requirements and ethical understanding.

LO STATEMENTS

Unique Course Number: ELXL501 Course Name: Microcontrollers & Applications Laboratory

Unique number	LO statement
EXL5611	Write assembly language programs and implement on 8051 kit
EXL5612	Write and implement assembly and embedded C programs for 8051 using Keil.
EXL5613	Write assembly program to interface with Peripheral Ic's
EXL5614	Design 8051 based System

Unique Course Number: ELXL502 Course Name: Digital Communication Laboratory

Unique number	LO statement
EXL5511	To observe and analyze digital modulation techniques
EXL5512	To observe Line Coding Format
EXL5513	To apply knowledge of error control coding to find syndrome vector
EXL5514	To plot channel capacity vs bandwidth graph

Unique Course Number: ELXL503 Course Name: Design With Linear Integrated Circuits Laboratory

Unique number	LO statement
ELX5341	Built the circuit and see the performance of the various applications of IC 741 linear applications such as integrator, differentiator, peak detector, precision rectifier, data converters.
ELX5342	Built the circuit and see the performance of the various applications of IC 741 nonlinear applications such as comparator, Schmitt triger

ELX5343	See the change of IC 723 regulator in terms of line and load regulation.
ELX5344	Perform and calculate the frequency of wein bridge oscillator and RC Phase shift oscillator and compare the same using calculated value.
ELX5345	Study the operation of 555 timer also understand the designing of astable and monostable multivibrator.
ELX5346	Design aspects of various filters and also see its performance using software multisim.

Unique Course Number: ELXLDLO5011   Course Name: Database management System Laboratory

Unique number	LO statement
	Identify Entities and Attributes
EXL5121	Design conceptual model using E-R and Construct queries.
EXL5122	Create and populate RDBMS using queries
EXL5123	Retrieve information using complex SQL queries
EXL5124	To implement ACID properties.
EXL5125	Design and implement real life project