Mahavir Education Trust's

SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE

Chembur, Mumbai - 400 088

UG Program in Electronics & Telecommunication Engineering

Academic Year:- 2018-19

Semester - V

Unique Course Number: 4. ECC501 Course Name: Microprocessors & Peripherals Interfacing

Unique CO Number	Course Outcome (CO) Statement
4. ECC5011	Understand the Basic concept of microcomputer systems.
4. ECC5012	Understand the architecture and hardware aspects of microprocessor 8086
4. ECC5013	Understand Software aspects of microprocessor `8086
4. ECC5014	Write Assembly Language Programs of 8086
4. ECC5015	Interface peripherals with 8086 and applications
4. ECC5016	Design elementary aspect of microprocessor based system.

Unique Course Number: 5.ECC502 Course Name: Digital Communication

Unique CO Number	Course Outcome (CO) Statement
5.ECC5021	Understand random variables and random processes of signal.
5.ECC5022	Apply concepts of Information Theory in source coding.
5.ECC5023	Evaluate the performance of different error control codes.
5.ECC5024	Compare different band-pass modulation demodulation techniques.
5.ECC5025	Evaluate different methods to eliminate Inter Symbol Interference.
5.ECC5026	Understand Different techniques of the optimum reception.

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Unique Course Number: 5.ECC503 Course Name: Electromagnetic Engineering

Unique CO Number	Course Outcome (CO) Statement
5.ECC5031	Apply vector calculus to understand the behavior of static electric fields in standard configurations
5.ECC5032	Explain and evaluate EM fields & their energies within conducting & anisotropic media
5.ECC5033	Apply vector calculus to understand the behavior of static magnetic fields in standard configurations
5.ECC5034	Analyze Maxwell's equation in different forms and apply them to diverse engineering problem
5.ECC5035	Derive and apply the steady transmission line equation to design of simple distributed circuit components
5.ECC5036	Students able to point out the EM field concept and determine the outcome of particular application

Unique Course Number: 3.ECC504 Course Name: Discrete Time Signal Processing

Unique CO Number	Course Outcome (CO) Statement
3.ECC5041	Understand the concepts of discrete-time Fourier transform and fast Fourier transform
3.ECC5042	Understand the concept and categories of Linear phase FIR filters
3.ECC5043	Demonstrate thorough knowledge in FIR filter design.
3.ECC5044	Apply different types of IIR filter design techniques
3.ECC5045	Analyze the effect of hardware limitations on performance of digital filters.
3.ECC5046	Apply the knowledge of DSP processors for various applications.

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Unique Course Number:4.ECCDLO5011 Course Name: Microelectronics

Unique CO Number	Course Outcome (CO) Statement
4.ECCDLO50111	Understand the basics of MOSFETs and its fabrication process
4.ECCDLO50112	Design and Analysis of Biasing Circuits for Integrated Circuits using MOSFET Active load
4.ECCDLO50113	Analysis of Single stage MOS active load amplifiers
4.ECCDLO50114	Analysis of Differential MOS active load amplifiers
4.ECCDLO50115	Study of Passive Device Fabrication in IC
4.ECCDLO50116	Study of different type of Power amplifiers using MOSFETs

Unique Course Number: 5.ECCDLO 5012 Course Name:TV & Video Engineering

Unique CO Number	Course Outcome (CO) Statement
5.ECCDLO50121	Understand basics of working of television system and working of monochrome television System.
5.ECCDLO50122	Learn Fundamentals of Color Television considering compatibility with monochrome television.
5.ECCDLO50123	Understand fundamentals of digital video and it's techniques.
5.ECCDLO50124	Learn different types of digital video broadcasting system
5.ECLDLO50125	Understand basic concepts of advanced digital TV systems
5.ECLDLO50126	Learn different types of Television display.

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Unique Course Number: 4.ECCDLO5014Course Name:Data Compression and Encryption

Unique CO Number	Course Outcome (CO) Statement
4.ECCDLO50141	Understand basic terminology, classification and different parameters for Compression and Encryption
4.ECCDLO50142	Explain Merits/Demerits of Different Text and Audio Compression Techniques and Working of the Algorithm
4.ECCDLO50143	Explain Merits/Demerits of Different Image and Video Compression Techniques and Working of the Algorithm
4.ECCDLO50144	Explain different Classic and Modern private key techniques for data security and their practicability.
4.ECCDLO50145	Implement techniques of Asymmetrical Key Cryptography to achieve data security .
4.ECCDLO50146	Apply their knowledge for system security and practical issues related to them.

Unique Course Number: 5.ECL502 Course Name: Digital Communication Laboratory

Unique CO Number	Course Outcome (CO) Statement
5.ECL5021	Understand the different blocks of MATLAB Simulink for the implementation of digital communication circuits.
5.ECL5022	Apply analog to digital conversion techniques using sampling theorem and Pulse Code Modulation for digital Communication.
5.ECL5023	Analyze different band pass modulation-demodulation techniques and its waveform.
5.ECL5024	Describe different line coding methods and its decoding.
5.ECL5025	Analyze the effect of signal distortion using Eye diagram.
5.ECL5026	Design and implement mini-project.

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Academic Year:- 2018-19

Unique Course Number: 4.ECL DLO5012 Course Name: TV & Video Engineering Lab

Unique CO Number	Course Outcome (CO) Statement
5.ECLDLO50121	Understand basic concepts of Monochrome Television.
5.ECLDLO50122	Understand concept of Color TV with the help of block diagram and IC TDA
5.ECLDLO50123	Learn basics of digital video and working of set top box trainer.
5.ECLDLO50124	Learn different types of digital video broadcasting system
5.ECLDLO50125	Understand basic concepts of advanced digital TV systems
5.ECLDLO50126	Learn different types of Television display

Unique Course Number: 8.ECL503 Course Name: Business Communication And Ethics

Unique CO Number	Course Outcome (CO) Statement
8.ECL5031	Design a technical document using precise language,suitable vocabulary and apt style.
8.ECL5032	Develop the life skills/interpersonal Skills to progress professionally by building stronger relationships.
8.ECL5033	Demonstrate awareness of contemporary issues , knowledge of professional and ethical responsibilities.
8.ECL5034	Apply the traits of a suitable candidate for a job / higher education,upon being trained in the techniques of holding a group discussion,facing interviews, and writing.
8.ECL5035	Deliver formal presentations , effectively implementing the verbal and non- verbal skills.
8.ECL5036	Demonstrate skills for participating in meetings and prepare its documentation

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Unique Course Number: 4.ECL504 Course Name: Open Source Technology for Communication Lab

Unique CO Number	Course Outcome (CO) Statement
4.ECL5041	Learn open source programming tools for communication lab.
4.ECL5042	Implement communication subsytem.
4.ECL5043	Use z-transform and Discrete Time Fourier Transform in the analysis of DT systems.
4.ECL5044	Implementation of Discrete Fourier transform (DFT) and verification of properties of DFT.
4.ECL5045	Analysis of different types of Linear Phase FIR filter and Design of FIR filter by window method.
4.ECL5046	Design of IIR filter by Bilinear & Impulse Invariant methods.

Unique Course Number: 4.ECLDLO5011 Course Name: Microelectronics Laboratory

Unique CO Number	Course Outcome (CO) Statement
4.ECLDLO50111	Understand the basic operation of MOSFETs
4.ECLDLO50112	Design a MOSFET Current source
4.ECLDLO50113	Implement a MOS Cascode Circuit
4.ECLDLO50114	Implement a single stage amplifier
4.ECLDLO50115	Implement a MOS active load amplifier
4.ECLDLO50116	Implement a Differential amplifier

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Unique Course Number: 4.ECL DLO5012 Course Name: TV & Video Engineering Lab

Unique CO Number	Course Outcome (CO) Statement
5.ECLDLO50121	Understand basic concepts of Monochrome Television.
5.ECLDLO50122	Understand concept of Color TV with the help of block diagram and IC TDA
5.ECLDLO50123	Learn basics of digital video and working of set top box trainer.
5.ECLDLO50124	Learn different types of digital video broadcasting system
5.ECLDLO50125	Understand basic concepts of advanced digital TV systems
5.ECLDLO50126	Learn different types of Television display

Unique Course Number:4.ECLDLO5014 Course Name: Data Compression and Encryption Laboratory

Unique CO Number	Course Outcome (CO) Statement
4.ECLDLO50141	Implement different algorithm for text Compression Techniques using OCTAVE.
4.ECLDLO50142	Implement different Audio Compression Techniques using OCTAVE.
4.ECLDLO50143	Implement different Image Compression Techniques using OCTAVE.
4.ECLDLO50144	Apply different methods of encryption to achieve data security using OCTAVE.
4.ECLDLO50145	Implement various techniques of Asymmetrical Key Cryptography to achieve data security using OCTAVE.
4.ECLDLO50146	implement Mini-Project