



Mahavir Education Trust's
SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
 Chembur, Mumbai - 400 088
UG Program in Electronics & Telecommunication Engineering
Academic Year:- 2020-21

Sem	Course Code	Course Name	CO Number	Course Outcome Statements
V	ECC501	Microprocessors & Peripherals Interfacing	2.ECL4026	Design and implement Mini-Project
			4. ECC5012	Understand the architecture and software aspect of 8086 microprocessor
			4. ECC5013	Use instruction set of 8086 to develop Assembly Language Program using various programming tools
			4. ECC5014	Illustrate how the different peripherals are interfaced with 8086 microprocessor
			4. ECC5015	Compare and discriminate between general purpose and Math processor
			4. ECC5016	Design elementary aspects of microprocessor based system
V	ECC502	Digital Communication	5.ECC5021	Apply the knowledge of statistics in digital communication.
			5.ECC5022	Apply different source coding techniques in digital communication
			5.ECC5023	Explain various methods of generating and detecting different types of error correcting codes.
			5.ECC5024	Analyze the digital modulation technique generation and detection, their power spectra and probability of error performance.
			5.ECC5025	Evaluate the power spectral density for various discrete PAM formats.
			5.ECC5026	Analyze the design of matched filter receiver for optimum performance.



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V	ECC503	Electromagnetic Engineering	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
V	ECC504	Discrete Time Signal Processing	3.ECC5041	Understand system representations and the relation between different transforms
			3.ECC5042	Understand the concepts of DFT and FFT and their applications
			3.ECC5043	Understand the architecture of DSP processors and its application in different areas of signal processing
			3.ECC5044	Analyze the effect of hardware limitations on performance of digital filters.
			3.ECC5045	Design digital IIR and FIR filters for the given specification
			3.ECC5046	Understand system representations and the relation between different transforms



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V	ECCDLO 5012	TV & Video Engineering	5.ECCDLO50121	Remember fundamentals of analog transmission and working of CRT while transmitting television signal
			5.ECCDLO50122	Understand fundamentals of TV system
			5.ECCDLO50123	Applying knowledge of analog systems while studying digital system
			5.ECCDLO50124	Analyzing difference between analog and digital broadcasting
			5.ECCDLO50125	Evaluate advancement of analog system to digital system
			5.ECCDLO50126	Evaluating methods for improving current display system
V	ECCDLO5014	Data Compression and Encryption	4.ECCDLO50141	Recall basic terminology, classification and different parameters for Compression and Encryption
			4.ECCDLO50142	Understand knowledge of Data Compression and System Security and their practicability
			4.ECCDLO50143	Apply Various Data Compression Techniques
			4.ECCDLO50144	Analyse different Lossy and Lossless Compression Techniques for different type of data
			4.ECCDLO50145	Evaluate different Public and Private Key Cryptography to achieve data security
			4.ECCDLO50146	Design different Cryptography algorithm to achieve data security



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V	ECL501	Microprocessors & Peripherals Interfacing LAB	4.ECL5011	Use Instructions Set of 8086 for writing Assembly Language Program
			4.ECL5012	Write Assembly Language Program by using String instructions.
			4.ECL5013	Use Turbo Assembler Software (TASM) for simulation of Assembly Language Program of 8086.
			4.ECL5014	Demonstrate the interfacing of peripherals to 8086.
			4.ECL5015	Demonstrate the interfacing of ADC & DAC to 8086.
			4.ECL5016	Demonstrates skills to check plagiarism and write mini-project report.
V	ECL502	Digital Communication Laboratory	5.ECL5021	Understand the different functions of MATLAB and different blocks of MATLAB Simulink for the implementation of digital communication circuits.(Understand)
			5.ECL5022	Apply analog to digital conversion techniques using sampling theorem and Pulse Code Modulation for digitalCommunication.(Apply)
			5.ECL5023	Analyze different base band and band pass modulation demodulation techniques and its waveform.(Analyze)
			5.ECL5024	Implement Source Coding Algorithm using MATLAB.(Apply)
			5.ECL5025	Analyze the effect of signal distortion using Eye diagram.(Analyze)
			5.ECL5026	Design and implement mini-project.(Create)



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V	ECL503	Business Communication And Ethics	9.ECL5031	Design a technical document using precise language,suitable vocabulary and apt style.
			9.ECL5032	Develop the life skills/interpersonal Skills to progress professionally by building stronger relationships.
			9.ECL5033	Demonstrate awareness of contemporary issues , knowledge of professional and ethical responsibilities.
			9.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.
			9.ECL5035	Deliver formal presentations , effectively implementing the verbal and non- verbal skills.
			9.ECL5036	Demonstrate skills for participating in meetings and prepare its documentation
V	ECL504	Open Source Technology for Communication Lab	5.ECL5041	Learn open source programming tools for communication lab.
			5.ECL5042	Implement communication subsystem.
			5.ECL5043	Use z-transform and Discrete Time Fourier Transform in the analysis of DT systems.
			5.ECL5044	Implementation of Discrete Fourier transform (DFT) and verification of properties of DFT.
			5.ECL5044	Implementation of Discrete Fourier transform (DFT) and verification of properties of DFT.
			5.ECL5046	Implement the concepts of DSP in mini project.



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V	ECL DLO5012	TV & Video Engineering Lab	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
V	ECLDLO5014	Data Compression and Encryption Laboratory	4.ECLDLO50141	Recall methodology of different text compression techniques and apply it using MATLAB
			4.ECLDLO50142	Understand different Audio Compression techniques and implement it using MATLAB
			4.ECLDLO50143	Apply different Image Compression techniques and implement it using MATLAB
			4.ECLDLO50144	Analyze different methods of Encryption to achieve data security using MATLAB
			4.ECLDLO50145	Evaluate performance of different cryptography techniques using MATLAB
			4.ECLDLO50146	Design and implement Mini-Project