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
VI	ECC601	Microcontrollers and Applications	4.ECC6011	Describe the architecture of 8051 and ARM7 microcontrollers.
			4.ECC6012	Explain Instruction set of 8051 and ARM7 microcontrollers.
			4.ECC6013	Write Assembly language and Embedded C program for 8051 and ARM7 microcontrollers.
			4.ECC6014	Illustrate Interfacing of various peripheral devices to 8051 and ARM7 microcontrollers.
			4.ECC6015	Compare between 8051 and ARM7 microcontrollers
			4.ECC6016	Develop an applications by using Microcontrollers
VI	ECC602	Computer Communication Networks	8.ECC6021	Understand the design of computer network and networking devices
			8.ECC6022	Understand the various design issues at different layers of TCP/IP
			8.ECC6023	Understand the function of multiple access protocols on Ethernet technology
			8.ECC6024	Apply the knowledge of inter-networking layer protocols to configure a network
			8.ECC6025	Apply transport and network layer protocols to model a simple network
			8.ECC6026	To analyze the operation of L2, L3 and L4 layer protocols on a network

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Sem	Course Code	Course Name	CO Number	Course Outcome Statements
VI	ECC603	Antenna & Radio Wave Propagation	5.ECC6031	Illustrate various antenna fundamental parameters
			5.ECC6032	Analyze the field equations for the basic radiating elements like linear wire antenna and loop antenna.
			5.ECC6033	Design linear and planar antenna arrays using isotropic and directional Sources.
			5.ECC6034	Interpret and analyze different aperture antenna.
			5.ECC6035	Design special types of antennas like microstrip, reflector antenna
			5.ECC6036	Detect and analyze radio wave propagation through different atmospheric conditions
VI	ECC604	Image Processing & Machine Vision	3.ECC6041	To Explain the fundamentals of Digital Image Processing and Machine Vision
			3.ECC6042	To demonstrate understanding of the basic concepts of two-dimensional transform
			3.ECC6043	To Apply the Image Enhancement in the Spatial Domain and Frequency Domain.
			3.ECC6044	To Analyze the methodologies for image restoration and morphology.
			3.ECC6045	To evaluate the methodologies for image segmentation and region Identification.
			3.ECC6046	To Design the classification techniques in Machine Vision

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Sem	Course Code	Course Name	CO Number	Course Outcome Statements
VI	ECCDLO6023	Database Management System	8.ECCDLO60231	Explain the concept of database management system and relational database.
			8.ECCDLO60232	Choose the appropriate database model.
			8.ECCDLO60233	Design the conceptual model using ER/EER and UML modelling for real life applications.
			8.ECCDLO60234	Analyze the concept of normalization to design an optimum database.
			8.ECCDLO60235	Formulate relational algebra queries and SQL queries to retrieve any type of information from database.
			8.ECCDLO60236	Justify the issues of transaction management processing, concurrency control and recovery process.
VI	ECL601	Microcontrollers & Applications Laboratory	4.ECL6011	Install and operate different IDE software for 8051and ARM7 Microcontrollers
			4.ECL6012	Install and operate simulations software for 8051and ARM7 Microcontrollers
			4.ECL6013	Use instructions set of 8051 for writing Assembly Language Program (ALP).
			4.ECL6014	Use instructions set of ARM7 for writing Assembly Language Program (ALP).
			4.ECL6015	Write embedded C program of 8051 and ARM7 to demonstrate the interfacing of peripherals
			4.ECL6016	Develop mini project based on 8051 microcontroller

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VI	ECL602	Computer Communication Networks Lab	8.ECL6021	Perform basic configuration on routers and Ethernet switch
			8.ECL6022	Apply the concept of network addressing to model a network
			8.ECL6023	Learn to simulate computer network and analyze simulation results
			8.ECL6024	Troubleshoot connectivity problems in a network providing end-to end communication
			8.ECL6025	Evaluate small and medium sized computer network including media types, end devices and interconnecting devices
			8.ECL6026	Evaluate various application layer protocols for different user application
VI	ECL603	Antenna & Radio Wave Propagation Lab	5.ECL6031	Differentiate different types of antenna
			5.ECL6032	Measure antenna radiation pattern
			5.ECL6033	Design interpret different antenna parameters
			5.ECL6034	Design directional and linear array antenna using MATLAB
			5.ECL6035	Design and interpret microstrip antenna
			5.ECL6036	Illustrate high gain directional aperture antenna

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Sem	Course Code	Course Name	CO Number	Course Outcome Statements
VI	ECL604	Image Processing & Machine Vision Lab	3.ECL6041	To have good knowledge of basics of Digital Image Processing
			3.ECL6042	To implement transforms on images
			3.ECL6043	To Apply spatial and frequency domain processing for enhancement
			3.ECL6044	To Analyze Image Morphology
			3.ECL6045	To Evaluate thresholding and segmentation of images for Machine Vision
			3.ECL6046	Design various image processing techniques to develop real time applications
VI	ECLDLO6023	Database Management System LAB	8.ECLDLO60231	Construct problem definition statements for real life applications and implement a database for the same.
			8.ECLDLO60232	Design conceptual models of a database using ER/EER modeling for real life applications.
			8.ECLDLO60233	Write queries in SQL to create the database and table structures using DDL and DML commands.
			8.ECLDLO60234	Apply different constraints to create table using SQL.
			8.ECLDLO60235	Apply nested queries, aggregate operators, set operations, views and joins to write SQL queries.
			8.ECLDLO60236	Design and implement mini project.