



Mahavir Education Trust's
Shah & Anchor Kutchhi Engineering College,
 Chembur, Mumbai 400 088
UG Program in Information Technology

Academic Year 2020-21
Semester – IV

Information Technology Academic Year 2020-21				
IV	ITC401	Engineering Mathematics-IV	1.ITC401.1	Apply the concepts of eigen values and eigen vectors to solve engineering problems
			1.ITC401.2	Illustrate the use of concepts of Complex Integration for evaluating integrals, computing residues & evaluate various contour integrals.
			1.ITC401.3	Apply the concept of Z- transformation and its inverse in engineering problems.
			1.ITC401.4	Apply the concept of probability distribution to engineering problems & testing hypothesis of small samples using sampling theory.
			1.ITC401.5	Apply the concept of Linear Programming to solve the optimization problems
			1.ITC401.6	Use the Non-Linear Programming techniques to solve the optimization problems.
IV	ITC402	Computer Networks and Network Design	5.ITC402.1	Describe the functionalities of each layer of the models and compare the Models.
			5.ITC402.2	Categorize the types of transmission media and explain data link layer concepts, design issues and protocols.
			5.ITC402.3	Analyze the routing protocols and assign IP address to networks.
			5.ITC402.4	Explain the data transportation and session management issues and related protocols used for end to end delivery of data.
			5.ITC402.5	List the data presentation techniques and illustrate the client/server model in application layer protocols.
			5.ITC402.6	Use of networking concepts of IP address, Routing, and application services to design a network for an organization
IV	ITC403	Operating System	8.ITC403.1	Understand the basic concepts related to Operating System.
			8.ITC403.2	Describe the process management policies and illustrate scheduling of processes by CPU
			8.ITC403.3	Explain and apply synchronization primitives and evaluate deadlock conditions as handled by Operating System.
			8.ITC403.4	Describe and analyze the memory allocation and management functions of Operating System.
			8.ITC403.5	Analyze and evaluate the services provided by Operating System for storage management.
			8.ITC403.6	Compare the functions of various special-purpose Operating Systems.
IV	ITC 404	Computer Organization and	8.ITC 404.1	Demonstrate the fundamentals of Digital Logic Design
			8.ITC 404.2	Describe basic organization of computer, the



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		Architecture		architecture of 8086 microprocessor and implement assembly language programming for 8086 microprocessors.
			8.ITC 404.3	Demonstrate control unit operations and conceptualize instruction level parallelism.
			8.ITC 404.4	List and Identify integers and real numbers and perform computer arithmetic operations on integers.
			8.ITC 404.5	Categorize memory organization and explain the function of each element of a memory hierarchy.
			8.ITC 404.6	Examine different methods for computer I/O mechanism.
			2.ITC405.1	Demonstrate the fundamentals of Digital Logic Design
			2.ITC405.2	Describe basic organization of computer, the architecture of 8086 microprocessor and implement assembly language programming for 8086 microprocessors.
			2.ITC405.3	Demonstrate control unit operations and conceptualize instruction level parallelism.
			2.ITC405.4	List and Identify integers and real numbers and perform computer arithmetic operations on integers.
			2.ITC405.5	Categorize memory organization and explain the function of each element of a memory hierarchy.
IV	ITC405	Computer Organization and Architecture	2.ITC405.6	Examine different methods for computer I/O mechanism.
			ITL401.1	Execute and evaluate network administration commands and demonstrate their use in different network scenarios
			ITL401.2	Demonstrate the installation and configuration of network simulator.
			ITL401.3	Demonstrate and measure different network scenarios and their performance behavior.
			ITL401.4	Implement the socket programming for client server architecture.
			ITL401.5	Analyze the traffic flow of different protocols
IV	ITL401	Network Lab	ITL401.6	Design a network for an organization using a network design tool
			ITL402.1	Execute and evaluate network administration commands and demonstrate their use in different network scenarios
			ITL402.2	Demonstrate the installation and configuration of network simulator.
			ITL402.3	Demonstrate and measure different network scenarios and their performance behavior.
			ITL402.4	Implement the socket programming for client server architecture.
			ITL402.5	Analyze the traffic flow of different protocols
IV	ITL402	Unix Lab	ITL402.6	Design a network for an organization using a network design tool



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IV	ITL403	Microprocessor Programming Lab	ITL403.1	Demonstrate various components and peripheral of computer system
			ITL403.2	Analyze and design combinational circuits
			ITL403.3	Build a program on a microprocessor using arithmetic & logical instruction set of 8086.
			ITL403.4	Develop the assembly level programming using 8086 loop instruction set.
			ITL403.5	Write programs based on string and procedure for 8086 microprocessor.
			ITL403.6	Design interfacing of peripheral devices with 8086 microprocessor.
IV	ITL404	PYTHON LAB(SBL)	ITL404.1	Understand the structure, syntax, and semantics of the Python language
			ITL404.2	Interpret advanced data types and functions in python
			ITL404.3	illustrate the concepts of object-oriented programming as used in Python
			ITL404.4	Create Python applications using modules, packages, multithreading and exception handling
			ITL404.5	Gain proficiency in writing File Handling programs ,also create GUI applications and evaluate database operations in python.
			ITL404.6	Design and Develop cost-effective robust applications using the latest Python trends and technologies
IV	2.ITM401	Mini Project – 1B	2.ITM401.1	Identify and Apply Knowledge to solve societal problems and research needs.
			2.ITM401.2	Summarize the proper inferences from available results through theoretical/ experimental/simulations
			2.ITM401.3	Acquire interpersonal Skills, capabilities of self-learning in a group,or as a member or a leader which leads to lifelong learning.
			2.ITM401.4	Apply standard norms of engineering practices to Analyse the impact of solutions in a societal and environmental contexts for sustainable development
			2.ITM401.5	Develop written and oral communication skill
			2.ITM401.6	Demonstrate project management principles during project work.