

Madhav Institute of Technology & Science, Gwalior- 474 005
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RG)

Department :

B.Tech (Information Technolog

Year

2022-2026

After completing this, the students will be able to:

Course Outcome

Semester I

Semester I	160121: Introduction to Information Technology	CO1	Define basic concepts of Information Technology
		CO2	Understand the role of IT professional
		CO3	Examining the cyber space and cyber crime
		CO4	Link the roles and opportunities of individual towards the online social media
		CO5	Reflect the applications of AI and ML for solving the problems over the real world proble
	160122: Computer Programming	CO1	identify situations where computational methods and computers would be useful.
		CO2	develop algorithms and flowchart for a given problem.
		CO3	understand the concepts of procedural programming.
		CO4	explain the concepts of object oriented programming and its significance in the real worl
		CO5	analyze the problems and choose suitable programming techniques to develop solution
		CO6	develop computer programs to solve real world problems.
	160123: Digital Logic Design	CO1	explain the basic components and functional units to define computer architecture
		CO2	explain the basic components and functional units to define computer architecture
		CO3	develop the understanding of combinational circuits
		CO4	analyse the basic concept of sequential circuits
		CO5	analyse the basic concept of sequential circuits
		CO6	reduce the Boolean functions to mitigate hardware complexity issues
	160124: Discrete Structure	CO1	explain the basic concept of set theory, propositional logic, graph theory, discrete nume
		CO2	illustrate the knowledge of course content and distinguish between them in terms of the
		CO3	identify the concepts of graph and tree for solving problems in the computer science.
		CO4	apply the concepts of studied topics with suitable technique faced in engineering proble
		CO5	analyze the set theory, propositional logic, graph theory, discrete numeric function and problem.
		CO6	build analytical skill and interpret applications of engineering beneficial in real time troub
	100022: Basic Electrical and Electronics Engineering	CO1	solve dc & ac circuits by applying fundamental laws & theorems
		CO2	compare the behavior of electrical and magnetic circuits for given input
		CO3	explain the working principle, construction, applications of rotating electrical machines
CO4		explain the working principle, constructional details, losses & applications of single phas	
CO5		select the logic gates for various applications in digital electronic circuits.	
CO6		explain characteristics of diode and transistor.	
160125: IT Workshop	CO1	understand the basic concept and structure of computer hardware and networking	
	CO2	demonstrate installation of windows and connections through ports at basic level.	
	CO3	identify the existing configuration of the computers and peripherals.	
	CO4	apply the knowledge about computer peripherals to identify/rectify problems onbo	
	CO5	explain the concept of Memory, Motherboard, Bus and SMPS.	
	CO6	manage data backup and restore operations on computer and update application	

	Basic Electrical and Electronics Engineering Lab	CO1	Verify circuit theorems.
		CO2	Perform tests on transformer for determination of losses, efficiency & polarity.
CO3		Acquire teamwork skills for working effectively in groups	
CO4		Prepare an organized technical report on experiments conducted in the laboratory	
	Computer Programming Lab	CO1	Demonstrate the fundamentals of computer programming
		CO2	Read, understand and trace the execution of program
		CO3	Develop Conditional and Iterative Statements
		CO4	Design the program using functions
		CO5	Implement the programs using Derived and User defined data types
		CO6	Design program for a given problem using computer programming
Semester II	160221: Data Structure	CO1	outline the basics of Algorithms and their performance criteria's.
		CO2	explain the working of linear/Non Linear data structures.
		CO3	identify the appropriate data structure to solve specific problems.
		CO4	analyze the performance of various Data Structures & their applications.
		CO5	evaluate the time/space complexities of various data structures & their applications
		CO6	design the optimal algorithmic solutions for various problems.
	160222: Python Programming	CO1	define basics syntax and features of python programming language
		CO2	solve computational problem using python language.
		CO3	take part in online coding platforms.
		CO4	inspect the python program for errors.
		CO5	design a program using the features of object oriented concept.
		CO6	construct the python code for real world problem using the libraries.
	160223: Database management system	CO1	Demonstrate the concepts of different type of database system.
		CO2	Apply Relational algebra concepts to design database system.
		CO3	Make use of queries to design and access database system.
		CO4	Analyze the evaluation of transaction processing and concurrency control.
		CO5	Determine the optimize database for real world applications.
		CO6	Design a database system for a real world application.
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160224: Computer System Organization	CO1	Demonstrate the computer architecture for defining basic component and functional uni	
	CO2	Recall different number system and solve the basic arithmetic operations of signed and	
	CO3	Develop the fundamental concept to understand the working of microprocessor.	
	CO4	Explain the basic concept of input output organization.	
	CO5	Compare various memory and mapping techniques.	
	CO6	Develop the skill of writing assembly language programming.	
100011: Engineering Mathamatics-I	CO1	Apply differential calculus in solving basic engineering problems	
	CO2	Use integration techniques to determine the solution of various complex problems	
	CO3	Solve linear higher order differential equation with constant coefficients	
	CO4	Apply the concepts, terminology, methods and conventions of Matrix to solve the mathe	
	CO5	Concept of Boolean algebra and graph theory	

160313: DATABASE MANAGEMENT SYSTEM Lab	CO1	construct database schema for a given problem domain.
	CO2	apply integrity constraints on a database schema using a state-of-the-art RDBMS.
	CO3	apply SQL queries using DDL and DML to design and access database systems.
	CO4	make use of operators and functions used in query.
	CO5	distinguish Tables and Views for database systems.
	CO6	develop a small project for a real world scenario.
160315: Python Programming LAB	CO1	write, test, and debug simple Python programs.
	CO2	solve computational problem using python language.
	CO3	familiar with basics syntax and features of python programming language.
	CO4	use Python lists, tuples, dictionaries for representing compound data.
	CO5	design a program utilizing the features of object oriented concept.
	CO6	utilize some of the libraries available for solving problems.
160221: Data Structure Lab	CO1	construct database schema for a given problem domain.
	CO2	apply integrity constraints on a database schema using a state-of-the-art RDBMS.
	CO3	apply SQL queries using DDL and DML to design and access database systems.
	CO4	make use of operators and functions used in query.
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