

Madhav Institute of Technology and Science, Gwalior
 (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
Department of Computer Science & Engineering and Information Technology

CO Attainment of B. Tech. Computer Science & Engineering
(Session: Jan-June 2020 Semester)

	Course Name	Course outcomes	CO Attainment %	Target	Gap	Action Taken
Semester4	150401: Design and Analysis of Algorithm	CO1 Tell the basic features of an Algorithms	78.67	65	0	Conducted Extra practice sessions
		CO2 Demonstrate a familiarity with major Algorithms and Data Structures	88	65	0	
		CO3 Apply important algorithmic design paradigms and methods of analysis	77.33	65	0	
		CO4 Analyze the asymptotic performance of Algorithms	78.67	65	0	
		CO5 Compare different design techniques to develop algorithms for computational problems.	86.67	65	0	
		CO6 Design algorithms using greedy strategy, divide and conquer approach, dynamic programming, backtracking, branch and bound approach.	58.67	65	6.33	
	150402: Database management system	CO1 Tell the terminology, features, classifications, and characteristics embodied in database systems	92	70	0	No action needed
		CO2 Explain different issues involved in the design and implementation of database system	86.67	70	0	
		CO3 Apply transaction processing concepts and recovery methods over real time data.	86.67	70	0	
		CO4 Analyze database schema for a given problem domain.	93.33	70	0	
		CO5 Justify principles for logical design of databases, including the E-R method and normalization approach.	88	70	0	
		CO6 Formulate, using relational algebra and SQL, solutions to a broad range of query problems.	85.33	70	0	
	150403: Operating system	CO1 Outline the basic concept of operating systems	62.67	60	0	Conducted Extra classes and tutorial classes
		CO2 Analyze the working of operating system	64	60	0	
		CO3 Examine the working of various scheduling/allocation approaches	81.33	60	0	
		CO4 Measure the performance of various scheduling/allocation approaches	57.33	60	2.67	
		CO5 Compare the various operating system problems/issues	54.67	60	5.33	
		CO6 Develop the Solution of various operating system problems/issues	32	60	28	
	Computer Organization	CO1 Recall the basic building blocks of computer Architecture	100	70	0	No action needed
		CO2 Compare different memories.	96	70	0	
		CO3 Apply the concept of memory mapping, multiprocessor and pipelining in solving real world	98.67	70	0	

Madhav Institute of Technology and Science, Gwalior
 (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
 Department of Computer Science & Engineering and Information Technology

CO Attainment of B. Tech. Computer Science & Engineering
(Session: Jan-June 2020 Semester)

	Course Name	Course outcomes	CO Attainment %	Target	Gap	Action Taken	
	150404: System C	CO4	Analyze various modes of Input-Output data transfer.	92	70	0	No action needed
		CO5	Evaluate the arithmetic related to the number system.	96	70	0	
		CO6	Develop the skill of writing low level programming.	82	70	0	
	10004: Cyber Security	CO1	Tell the basic terminologies of cyber security	85.33	70	0	
		CO2	Explain the basic concepts of Networking and Internet	92	70	0	
		CO3	Apply various methods used to protect data in the internet environment in real world situations	86.67	70	0	
		CO4	Discover the Concepts of IP security and Architecture	87.67	70	0	
		CO5	Compare various types of Cyber Security Threats/ Vulnerabilities	90.67	70	0	
		CO6	Develop the understanding of Cyber Crime Investigation and IT Act 2000	89.33	70	0	
150601: Compiler Design	CO1	Recall the concepts of finite automata and context free grammar	76	65	0	No action needed	
	CO2	Build the concept of working of compiler	65.33	65	0		
	CO3	Examine various parsing techniques and their comparison	70.67	65	0		
	CO4	Compare various code generation and code optimization techniques.	76	65	0		
	CO5	Analyze different tools and techniques for designing a compiler	69.33	65	0		
	CO6	Design various phases of compiler	76	65	0		
150602: Computer Networks	CO1	Explain the fundamental concepts of Computer Networks.	73.33	70	0	No action needed	
	CO2	Illustrate the basic taxonomy & terminologies of computer network protocols.	74.67	70	0		
	CO3	Develop a concept for understanding advance computer network.	74.67	70	0		
	CO4	Build the skill of IP addressing and routing mechanism	76	70	0		
	CO5	Predict the performance of computer network in congestion and Internet.	69.33	70	0.67		
	CO6	Construct the network environment for implementation of computer networking concept.	80	70	0		
MOBILE COMMUNICATIONS	CO1	explain the basic concepts of mobile telecommunications system.	96	70	0	No action needed	
	CO2	demonstrate the infrastructure to develop mobile communications system	98.67	70	0		
	CO3	classify the different generations and technology for mobile communications.	100	70	0		

Madhav Institute of Technology and Science, Gwalior
 (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
Department of Computer Science & Engineering and Information Technology

CO Attainment of B. Tech. Computer Science & Engineering
(Session: Jan-June 2020 Semester)

	Course Name	Course outcomes	CO Attainment %	Target	Gap	Action Taken	
Semester6	150613: MC COMPUT	CO4	examine the working of different protocols of wireless mobile communication technology.	98.67	70	0	No action needed
		CO5	determine the importance of each technology suitable for different situation of mobile and wireless communications.	96	70	0	
		CO6	develop protocols for Adhoc and infrastructure based wireless networks.	92	70	0	
	160611: Network and Web security	CO1	Explain cryptographic algorithms, hash algorithms and authentication mechanisms.	78.67	60	0	No action needed
		CO2	Illustrate fundamentals of number theory, attacks and security principles.	88	60	0	
		CO3	Apply number theory and various algorithms to achieve principles of security.	80	60	0	
		CO4	Analyze the cause for various existing network attacks and describe the working of available security controls	65	60	0	
		CO5	Examine the vulnerabilities in IT infrastructure.	62.67	60	0	
		CO6	Predict the attacks and controls associated with IP, transport-level, web and e-mail security.	62.67	60	0	
	900106: DATA STRUCTURE	CO1	Outline the basics of algorithms and their performance criteria's	96	70	0	No action needed
		CO2	Explain the working of linear / Non linear data structures	96	70	0	
		CO3	Identify the appropriate data structure to solve specific problems	94.67	70	0	
		CO4	Analyze the performance of various data structures & their applications	96	70	0	
		CO5	Evaluate the time/ space complexities of various data structures & their applications	96	70	0	
		CO6	Design the optimal algorithmic solutions for various problems	96	70	0	
	900107 (OC): Python Programming	CO1	explain the numbers, Math, functions, Strings, List, Tuples and Dictionaries in Python	82	60	0	No action needed
		CO2	apply different Decision-Making statements and Functions	81.5	60	0	
		CO3	identify the Object-oriented programming in Python	76.3	60	0	
CO4		analyze the different File handling operations	65.33	60	0		
CO5		design GUI Applications in Python and evaluate different database operations	85	60	0		
CO6		develop Client-Server network applications using Python	61.33	60	0		
ige	CO1	Explain different modalities and current techniques in image acquisition.	66.67	60	0		
	CO2	Classify spatial and frequency domain techniques in image processing.	66.67	60	0		

Madhav Institute of Technology and Science, Gwalior
 (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
Department of Computer Science & Engineering and Information Technology

CO Attainment of B. Tech. Computer Science & Engineering
(Session: Jan-June 2020 Semester)

	Course Name	Course outcomes	CO Attainment %	Target	Gap	Action Taken
Semester8	BCSL801: Image Processing	CO3 Apply image processing techniques to enhance visual images.	66.67	60	0	Given extra assignments to students
		CO4 Analyze the constraints in image processing when dealing with real problems	66.67	60	0	
		CO5 Evaluate various enhancement, restoration and retrieval techniques of image processing	61.33	60	0	
		CO6 Design a system using mathematical models and principle of digital image processing for real world problems	58.67	60	1.33	
	BCSL802: Data warehouse and data Mining	CO1 Tell various methods for storing & retrieving data from different data sources /repository.	56	60	4	Detailed analysis of conducted Quizzes and assignments. Also, Conducted extra classes
		CO2 Classify various data bases and data models of data warehouse.	61.33	60	0	
		CO3 Apply pre-processing techniques for construction of data warehouse	52	60	8	
		CO4 Analyze data mining algorithms for knowledge discovery & prediction.	66.67	60	0	
		CO5 Choose appropriate data mining method for finding of association rules from transactional databases.	48	60	12	
		CO6 Develop various classification algorithms for data using data mining.	45.33	60	14.67	
	BCSL803: Neural Network and Fuzzy systems	CO1 . Explain the concept of Artificial Neural Network and Fuzzy Logic.	64	60	0	Conducted extra classes
		CO2 Illustrate various problems to be solved through Fuzzy Systems.	54.67	60	5.33	
		CO3 Make use of single and multi-layer feed-forward neural networks.	61.33	60	0	
		CO4 Analyze various Neural Networks in order to solve problems effectively and efficiently.	57.33	60	2.67	
		CO5 Determine the roll of Neural Networks & Fuzzy Systems in problem solving.	61.33	60	0	
		CO6 Develop and train different supervised and unsupervised networks.	32	60	28	

Madhav Institute of Technology and Science, Gwalior
 (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
 Department of Computer Science & Engineering and Information Technology

CO Attainment of B. Tech. Computer Science & Engineering
(Session: Jan-June 2020 Semester)

	Course Name	Course outcomes	CO Attainment %	Target	Gap	Action Taken
	BCSL804: Internet of Things and Applications	CO1 Explain internet of things, evolution of IoT, applications of IoT	64	65	1	Detailed analysis of conducted Quizzes and assignments with the students.
		CO2 classify IoT architecture, IoT service life cycle and application of device/cloud collaboration	66.67	65	0	
		CO3 Apply the concept of IoT in real world scenario	64	65	1	
		CO4 Analyse security and privacy in the IoT	60	65	5	
		CO5 choose appropriate framework for distributed data analysis for IoT and anomaly detection	65.33	65	0	
		CO6 develop small low cost embedded systems	66.67	65	0	