Madhav Institute of Technology and Science, Gwalior

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of Information Technology

CO Attainment of B. Tech. Information Technology

Session: 2021 Admitted Batch

	Course Name		Course outcomes	Direct Attainment %	Level of Direct Attainment	Indirect Attainment %	Level of Indirect Attainment	Overall level of Attainment	Target	Target of level	Gap	Attained/ Not Attained	Action Taken
Semester I	**100015: Energy Environment, Ecology & Society**	CO1	describe various energy resources, their conversion to electrical power and role in technological & economic development.	80.0	3.0	81.2	3.0	3.00	70	3.0	0	Attained	Students are encouraged to observe, to gain insight into possible approaches/solutions/algorithms to real life problems.
		CO2	update with national/international power status and renewable power development targets & missions.	76.8	3.0	81.2	3.0	3.00	70	3.0	0	Attained	
		CO3	recognize the impact of pollution on the ecosystem and control policies adopted at national/international levels.	76.8	3.0	84.1	3.0	3.00	70	3.0	0	Attained	
		CO4	illustrate the concepts of ecosystems and their conservation.	77.6	3.0	85.5	3.0	3.00	70	3.0	0	Attained	Students are motivated to develop mini-projects focusing on real world problems.
		CO5	solve practical problems of society in a sustainable and ethical manner.	75.2	3.0	78.3	3.0	3.00	70	3.0	0	Attained	Level of target should be improved.
		CO6	fulfill professional duties keeping in mind the environmental safety, health, and welfare of public.	76.8	3.0	85.5	3.0	3.00	70	3.0	0	Attained	
	230102:Introduction to Computer Programming	CO1	Identify situations where computational methods and computers would be useful.	75	3.0	81	3.0	3	65	2.5	0	Attained	Additional topic specific tests should be conducted
		CO2	Describe the basic principles of imperative and structural programming.	76	3.0	79.71	3.0	3	65	2.5	0	Attained	
		CO3	Develop a pseudo-code and flowchart for a given problem.	62	3.0	80	3.0	3	65	2.5	0	Attained	
		CO4	Analyze the problems and choose suitable programming techniques to develop solutions.	72	3.0	78	3.0	3	65	2.5	0	Attained	
		CO5	Design, implement, debug and test programs.	69.6	3.0	79.71	3.0	3	65	2.5	0	Attained	
		CO6	Design computer programs to solve real world problems.	76.8	3.0	79.71	3.0	3	65	2.5	0	Attained	
Semester II	**160211: Data Structure**	CO1	outline the basics of Algorithms and their performance criteria's.	68	2.8	88.4	3	2.84	60	2	-0.84	Attained	Students are encouraged to observe, to gain insight into possible approaches/solutions/algorithms to real life problems.
		CO2	explain the working of linear/Non Linear data structures.	61.6	2.2	91.3	3	2.33	60	2	-0.33	Attained	
		CO3	identify the appropriate data structure to solve specific problems.	62.4	2.2	89.9	3	2.39	60	2	-0.39	Attained	
		CO4	analyze the performance of various Data Structures & their applications.	60	2.0	89.9	3	2.2	60	2	-0.2	Attained	Research oriented mini skill projects are encouraged to develop and hone their research skills.
		CO5	evaluate the time/space complexities of various data structures & their applications	57.6	1.8	88.4	3	2.01	60	2	-0.01	Attained	
		CO6	design the optimal algorithmic solutions for various problems.	55.2	1.5	91.3	3	1.82	60	2	0.18	Not Attained	more practical approach and problems will be introduced with students.
	160311: Digital Electronics	CO1	explain the basic components and functional units to define computer architecture	68	2.8	76.8	3.0	2.84	65	2.5	-0.34	Attained	Additional topic specific tests should be conducted
		CO2	explain the basic components and functional units to define computer architecture	61.6	2.2	62.3	2.2	2.17	65	2.5	0.33	Not Attained	Extra classes to be conducted for slow learners beyond the regular planned classes.
		CO3	develop the understanding of combinational circuits	69	2.9	73.9	3.0	2.92	65	2.5	-0.42	Attained	Students are motivated to develop mini-projects focusing on real world problems.
		CO4	analyse the basic concept of sequential circuits	76	3.0	71.0	3.0	3.00	65	2.5	-0.50	Attained	Design of more converter should be initiated to make the work of students as par with industrial standards.
		CO5	analyse the basic concept of sequential circuits	55.2	1.5	63.8	2.4	1.69	65	2.5	0.81	Not Attained	More practical approach and problems will be introduced with students using K-map simpilfication technique.
		CO6	reduce the Boolean functions to mitigate hardware complexity issues	70	3.0	75.4	3.0	3.00	65	2.5	-0.50	Attained	Level of target shoul be increased
	160212:OOPs	CO1	Tell the concepts of classses & objects and their significance in real world	61.5	2.2	79.2	3	2.32	65	2.5	0.18	Not Attained	Arrangement of Remedial Classes
		CO2	Explain the benefits of object oriented design	59	1.9	57.6	1.8	1.87	65	2.5	0.63	Not Attained	Discussed extra Tutorial- sheets
		CO3	Build C++ classes using appropriate encapsulation and design principles	69.2	2.9	43.2	0	2.33	65	2.5	0.16	Not Attained	Arrangement of Remedial Classes
		CO4	Analyze the utilization of inheritance and polymorphism in the solutions of problems	64.1	2.4	79.2	3	2.52	65	2.5	0	Attained	More HOT questions should be added

		CO5	Choose appropriate lbject oriented programming concepts for solving real world problems	76.9	3.0	60	2	2.8	65	2.5	0	Attained	Level of questions should be improved.
		CO6	Develop solutions to problems demonstrating usage of control structures , modularity , I/O and other standard language constructs	66.6	2.7	57.6	1.8	2.48	65	2.5	0.02	Attained	Students are encouraged to participate in various coding competitions which involves the design and development of OOPS based software.