MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous Institute Affiliated to RGPV, Bhopal)
NAAC Accredited with A++ Grade

Session: Jan- June 2023

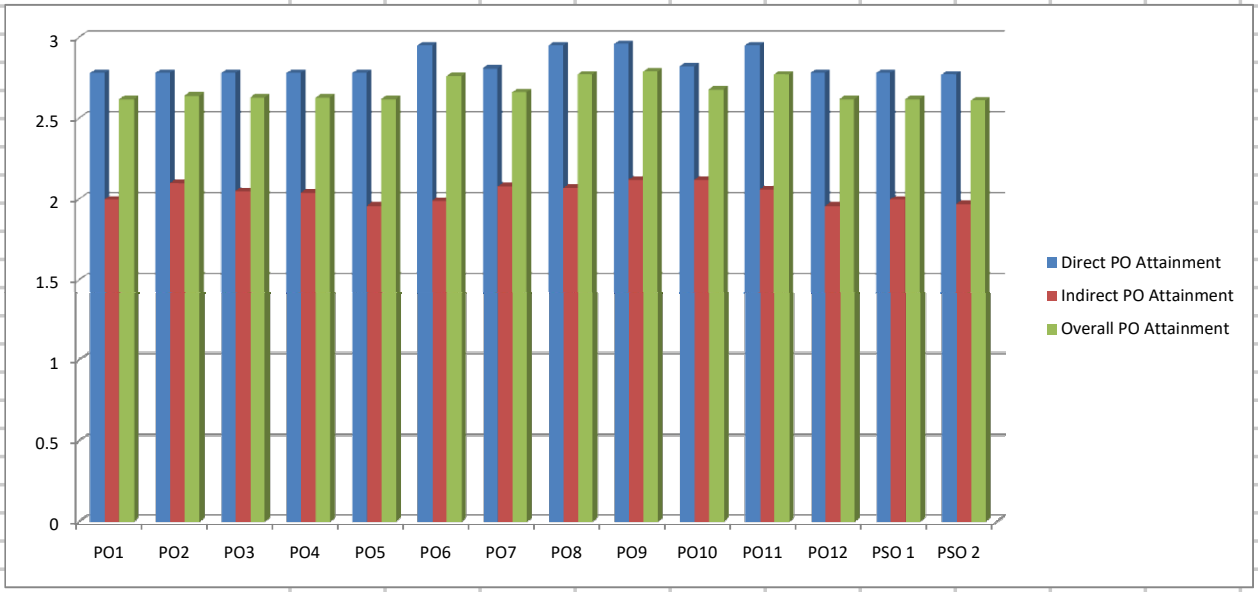
S.No.	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
1	Data Structures (2160221)	1.64	1.73	1.73	1.67	1.64		1.4			1.8		1.8	1.58	1.76
2	Data Structures LAB (2160221)	3	3	3	3	3		3			3		3	3	3
3	Python Programming (2160222)	2.98	2.98	2.98	2.99	2.98		3			2.95		2.95	2.98	2.98
4	Python Programming LAB (2160222)	3	3	3	3	3		3			3		3	3	3
5	Data Base Management System (2160223)	3	2.83	3	2.92	3	3	3	3	3	3	3	2.92	2.9	
6	Data Base Management System LAB (2160223)	3	2.83	3	2.92	3	3	3	3	3	3	3	2.92	2.9	
7	Computer System Organization (2160224)	2.76	2.87	2.77	2.89	2.71	2.8	2.8	2.8					2.89	2.77
8	Computer Graphics and Multimedia (160411)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	Computer Graphics and Multimedia LAB (160411)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10	Computer Networks (160413)	2.77	2.73	2.73	2.73	2.73	2.82	2.82	2.82	2.82	2.73	2.73	2.73	2.67	
11	Compiler Design (160611)	1.64	1.67	1.67	1.6	1.72		2.2			2.2		1.8	1.71	1.69
12	Compiler Design LAB (160611)	3	3	3	3	3		3			3		3	3	3
13	Data Mining (160612)	2.74	2.83	2.72	2.85	2.74		3			2.6		2.6	2.8	2.81
14	Data Mining LAB (160612)	3	3	3	3	3		3			3		3	3	3
15	Artificial Intelligence and Machine Learning (160613)	3	2.95	2.95	2.97	2.96	2.95			2.9	3	2.95	2.95	2.97	2.96
16	Artificial Intelligence and Machine Learning LAB (160613)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Direct PO Attainment	2.78	2.78	2.78	2.78	2.78	2.95	2.81	2.95	2.96	2.82	2.95	2.78	2.78	2.77

	INDIRECT PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
Survey 1	(Exit Survey)	2.06	2.26	2.19	2.23	2.26	2.23	2.32	2.19	2.39	2.26	2.23	2.35	2.19	2.23
Survey 2	(Alumni Survey)	2.1	2.1	2.06	2.14	2.01	2.08	2.06	2.12	2.14	2.19	2.26	2.23	2.15	2.1
Survey 3	(Employer Survey)	1.84	1.93	1.9	1.74	1.61	1.66	1.87	1.89	1.82	1.9	1.68	1.31	1.66	1.58
	Indirect PO Attainment	2	2.1	2.05	2.04	1.96	1.99	2.08	2.07	2.12	2.12	2.06	1.96	2	1.97

PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
Direct PO Attainment	2.78	2.78	2.78	2.78	2.78	2.95	2.81	2.95	2.96	2.82	2.95	2.78	2.78	2.77
Indirect PO Attainment	2	2.1	2.05	2.04	1.96	1.99	2.08	2.07	2.12	2.12	2.06	1.96	2	1.97
Overall PO Attainment	2.62	2.64	2.63	2.63	2.62	2.76	2.66	2.77	2.79	2.68	2.77	2.62	2.62	2.61

Direct PO1 Attainment	Average of PO1s of all courses
Direct PO2 Attainment	Average of PO2s of all courses

Overall PO Attainment	Average of respective direct and indirect POs



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Department of Information Technology

Batch 2019-2023 Exit Survey

Response number	PO1. Engineering knowledge:	PO2. Problem analysis:	PO3. Design/development of solutions:	PO4. Conduct investigations of complex problems:	PO5. Modern tool usage:	PO6. The engineer and society:	PO7. Environment and sustainability:	PO8. Ethics:	PO9. Individual and team work:	PO10. Communication:	PO11. Project management and finance:	PO12. Life-long learning:	PSO1. Students are able to exhibit analytical & logical skills and apply knowledge of Information Technology.	PSO2. Students are able to identify, formulate and resolve real-life/social problems by using current development in the field of information technology.
1	Adequate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
2	Substanti	4/Very Go	4/Very Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	4/Very Go	4/Very Go	4/Very Goo	4/Very G	4/Very Good	Excellent
3	Low (Sligh	2/Average	2/Average	2/Average	2/Average	2/Average	2/Average	2/Averag	3/Good	2/Average	1/Below Av	2/Averag	2/Average	Below Average
4	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
5	Highly Sul	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent
6	Adequate	2/Average	2/Average	2/Average	2/Average	3/Good	3/Good	2/Averag	3/Good	4/Very Go	2/Average	3/Good	2/Average	Good
7	Adequate	4/Very Go	4/Very Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	4/Very Go	4/Very Go	4/Very Goo	4/Very G	4/Very Good	Very Good
8	Highly Sul	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent
9	Substanti	5/Excelle	4/Very Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	5/Excelle	3/Good	3/Good	5/Excelle	4/Very Good	Good
10	Adequate	2/Average	2/Average	2/Average	2/Average	3/Good	3/Good	2/Averag	3/Good	4/Very Go	3/Good	3/Good	2/Average	Very Good
11	Substanti	4/Very Go	5/Excellent	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	4/Very Go	4/Very Go	4/Very Goo	4/Very G	4/Very Good	Very Good
12	Substanti	4/Very Go	4/Very Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	4/Very Go	4/Very Go	4/Very Goo	4/Very G	4/Very Good	Very Good
13	Substanti	3/Good	3/Good	3/Good	4/Very Go	4/Very Good	4/Very Good	5/Excelle	4/Very Go	5/Excelle	4/Very Goo	5/Excelle	4/Very Good	Very Good
14	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
15	Substanti	3/Good	3/Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	5/Excelle	5/Excelle	4/Very Goo	4/Very G	4/Very Good	Good
16	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	2/Average	Average
17	Highly Sul	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent
18	Low (Sligh	4/Very Go	4/Very Good	3/Good	1/Below A	2/Average	1/Below Ave	1/Below	2/Average	2/Average	2/Average	4/Very G	3/Good	Below Average
19	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
20	Adequate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Average
21	Adequate	3/Good	2/Average	2/Average	3/Good	2/Average	2/Average	2/Averag	2/Average	1/Below A	3/Good	3/Good	2/Average	Average
22	Low (Sligh	1/Below A	1/Below Ave	1/Below Avera	2/Average	2/Average	2/Average	1/Below	3/Good	2/Average	2/Average	1/Below	1/Below Average	Average
23	Adequate	4/Very Go	3/Good	5/Excellent	2/Average	2/Average	3/Good	2/Averag	4/Very Go	2/Average	2/Average	3/Good	3/Good	Very Good
24	Low (Sligh	1/Below A	1/Below Ave	1/Below Avera	1/Below A	1/Below Ave	3/Good	3/Good	1/Below A	1/Below A	1/Below Av	1/Below	1/Below Average	Below Average
25	Highly Sul	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent
26	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
27	Moderate	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	3/Good	Good
28	Substanti	5/Excelle	5/Excellent	4/Very Good	5/Excelle	4/Very Good	4/Very Good	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent
29	Moderate	2/Average	2/Average	2/Average	5/Excelle	2/Average	3/Good	2/Averag	3/Good	2/Average	3/Good	2/Averag	2/Average	Good
30	Substanti	4/Very Go	4/Very Good	4/Very Good	4/Very Go	4/Very Good	4/Very Good	4/Very G	4/Very Go	4/Very Go	4/Very Goo	4/Very G	4/Very Good	Very Good
31	Highly Sul	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excellent	5/Excellent	5/Excelle	5/Excelle	5/Excelle	5/Excellent	5/Excelle	5/Excellent	Excellent

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Assessment & Action Taken Report of Overall Program Outcomes

POs	PO Statement	Direct PO Attainment	Indirect PO Attainment	Overall PO Attainment	Target	Gap	Status of PO Attainment	Action Taken Report
PO 1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems	2.78	2	2.62	2.6	-0.02	Attained	Highlighted the significance of foundational sciences in the Information Technology field through virtual tours of domain-specific labs.
PO 2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences	2.78	2.1	2.64	2.6	-0.04	Attained	Importance of conducting a literature survey was underscored for the students. Hackathon events are conducted, where the students are exposed to latest technologies.
PO 3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations	2.78	2.05	2.63	2.6	-0.03	Attained	Students are motivated to develop mini-projects focusing on real world problems. Organized Expert Lectures from leading R & D organizations.
PO 4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions	2.78	2.04	2.63	2.6	-0.03	Attained	Leveraging the Industry Institute labs, students were shown practical solutions to engineering problems. Additionally, students were tasked with self-study projects, break down in various levels.
PO 5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations	2.78	1.96	2.62	2.6	-0.02	Attained	Students are exposed to different open source software during their lab sessions and students do projects using modern tools like Android programming, Internet of things in design & Thinking lab sessions.

PO 6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice	**2.95**	**1.99**	**2.76**	**2.6**	**-0.16**	Attained	Students are motivated to be part different chapters & Institute level clubs. Students are also motivated to be the part of BoS and different departmental & Institute level bodies.
PO 7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development	**2.81**	**2.08**	**2.66**	**2.6**	**-0.06**	Attained	The e waste management and disposal were outlined through videos. The awareness of the role of IT in ecological sustainability was created through eco club.
PO 8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice	**2.95**	**2.07**	**2.77**	**2.6**	**-0.17**	Attained	The molding of an individual's personality traits by engineers, guided by ethics, is crucial for instilling discipline in students and fostering responsible citizenship. This principle is underscored by both the Constitution of India and the curriculum on business ethics.
PO 9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings	**2.96**	**2.12**	**2.79**	**2.6**	**-0.19**	Attained	As a component of the self-study assessment, students were tasked with small group projects. Collaborating in these groups allowed them to grasp the complexities of teamwork and the decision-making process.
PO 10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions	**2.82**	**2.12**	**2.68**	**2.6**	**-0.08**	Attained	Effectively communicate intricate engineering activities within the engineering community and society at large. This includes the ability to comprehend and compose effective reports and design documentation, deliver compelling presentations, and provide and receive clear instructions.
PO 11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to	**2.95**	**2.06**	**2.77**	**2.6**	**-0.17**	Attained	Actively participating in curricular, co-curricular and technical clubs gives students practical experience on small group tasks and management of related finances. Technically also, students were assigned small projects in groups as part of self-study assessment, which taught them the nuances of project management.

PO 12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change	**2.78**	**1.96**	**2.62**	**2.6**	**-0.02**	Attained	Establishing a Centre for Soft Skills and Life Long Learning for conduction of various activities.
PSO 1	Students are able to exhibit analytical & logical skills and apply knowledge of Information Technology.	**2.78**	**2**	**2.62**	**2.6**	**-0.02**	Attained	More focus is required on problem solving methods for solving existing problem of IT industry.
PSO 2	Students are able to identify, formulate and resolve real life/social problems by using current development in the field of information technology.	**2.77**	**1.97**	**2.61**	**2.6**	**-0.01**	Attained	Conduction of industrial /professional training/ internship for the students