MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR

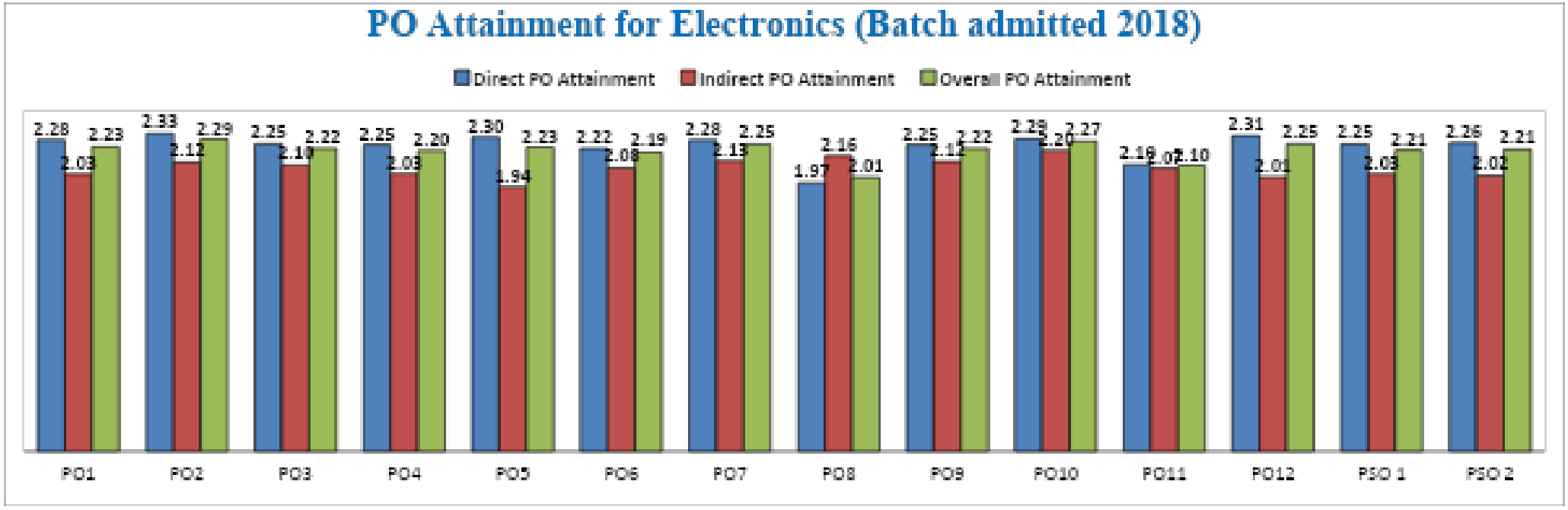
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute, Affiliated to R.G.P.V. Bhopal)

Department of Electronics Engineering

PO Attainment of Year 2021- 22 (For batch admitted in the Year 2018)

1. Summary of Program Outcomes attainments

PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
Direct PO Attainment	2.28	2.33	2.25	2.25	2.30	2.22	2.28	1.97	2.25	2.29	2.10	2.31	2.25	2.26
Indirect PO Attainment	2.03	2.12	2.10	2.03	1.94	2.08	2.13	2.16	2.12	2.20	2.07	2.01	2.03	2.02
Overall PO Attainment	2.23	2.29	2.22	2.20	2.23	2.20	2.25	2.01	2.22	2.27	2.10	2.25	2.21	2.21



2. Assessment of Direct Program Outcomes

Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
140302/200302 Electronics – I	2.02	2.06	2.08	2.05	1.95	2.02	2.09	1.85	2.07	2.02	2.23	2.03	2.02	2.02
140303 /200303 Digital Circuits And Systems	2.41	2.44	2.58	2.06	1.24	2.25	2.58	2.14	2.58	2.41	2.12	2.08	1.91	2.58
140304/200304 Network Theory	2.15	2.06	2.15	2.00	2.00	2.26	2.16		2.26	2.09	1.90	2.15	2.05	2.15
140305/200305 Signals And Systems	2.08	2.07	1.94	1.80	1.88	2.09	1.74		2.31	1.96	2.25	2.22	2.03	2.09
140401/200401 Electronics-II	2.17	2.22	2.08	2.33	2.17	2.29	2.25	1.91	2.17	2.40	1.92	1.96	2.01	2.15
140402/200402 Analog Communication	1.70	1.70	1.80	1.71	1.50	1.50	1.50				1.50	1.50	1.75	1.50
140403/200403 Communication Networks	1.91	1.93	1.88	1.86	1.94	1.98	1.72				1.92	1.88	1.90	1.98
140404 Electronics Measurement and Instrumentation	2.69	2.69	2.75	2.63	2.69		2.82		2.60	2.63	2.24	2.76	2.65	2.38
200404 Stochastic Process	2.62	2.62	2.62	2.62	2.74	2.90	2.90		2.76	2.90	2.44	2.90	2.49	2.62
200503 Microprocessor and Interfacing (DC 10)	2.40	2.49	2.35	2.38	2.46	2.40	2.58		2.58	2.58	2.34	2.43	2.39	2.33

140502/ 200502 Electromagnetic Fields (DC 9)	2.50	2.66	2.51	2.49	2.49	2.62	2.70		2.40	2.70	2.17	2.57	2.47	2.51
140504/ 200504 Linear Control Theory (DC 11)	2.22	2.22	2.17	2.22	2.17		2.10		2.20	2.22	2.12	2.16	2.17	2.23
140505/ 200505 5444EL Digital Communication (DC 12)	1.50	1.50	1.52		1.59	1.36	1.50		1.31			1.59	1.37	1.27
140503 Data Communication (DC 10)	2.52	2.52	1.84	2.28	2.80	2.77	2.77		1.82	1.95	1.52	2.47	2.15	2.77
140601 Microprocessor and Interfacing	2.42	2.42	1.95	2.74	2.40	1.83	2.22		1.95	1.93	1.87	2.48	1.96	1.95
140602 Digital Signal Processing	2.60	2.68	2.35	2.31	2.72	2.68	2.60		2.24	2.25	2.60	2.48	2.72	2.24
200602 Data Communication	2.51	2.83	2.51	2.56	2.83	2.55	2.74			2.51	2.51	2.64	2.57	2.63
140603 Optical Communication (DE-1)	2.11	2.23	2.09		2.34	1.95	1.95		1.94	1.95	1.95	2.11	2.23	2.00
140613 Antenna and Wave Propagation(DE-1)	2.24	2.24	2.43	2.18	2.18	2.16	2.20	1.72		2.17	2.07	2.41	2.41	2.60
140615 OC-1 (Intelligent Control)	2.04	2.07	2.04	1.90	2.10	1.86	2.16	1.60	1.90	1.93	1.93	2.09	2.16	2.06
140605 OC-1 (Embeded System)	2.27	2.74	2.67	2.27	2.67	2.27			2.27	2.27	2.13	2.74	2.27	2.51
DE-3 Microwave Engineering	2.52	2.65	2.64	2.50	2.72	2.71	2.84		2.65	2.43	2.00	2.51	2.77	2.64
DE-3 Satellite & RADAR Communication	2.32	2.30	2.28	2.30	2.54	2.20	2.20		2.32	2.28		2.32	2.60	2.28

DE-3 VLSI Design	**2.45**	**2.30**	**2.34**	**2.21**	**2.66**	**2.20**	**2.13**			**2.20**	**2.03**	**2.58**	**2.58**	**2.46**
Major Project	**2.68**	**2.58**	**2.76**		**2.76**			**2.58**	**2.58**	**2.58**	**2.58**	**2.76**	**2.64**	**2.58**

3. Assessment of Indirect Program Outcomes

INDIRECT PO ATTAINMENT	PO1	PO2	PO3	PO 4	PO5	PO 6	PO7	PO 8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
(Exit Survey)	2.20	2.29	2.27	2.2 6	2.23	2.3 5	2.29	2.3 2	2.33	2.41	2.32	2.41	2.30	2.26
(Alumni Survey)	2.05	2.13	2.12	2.1 0	1.98	2.2 2	2.23	2.2 9	2.21	2.31	2.22	2.31	2.15	2.22
(Employer Survey)	1.84	1.93	1.90	1.7 4	1.61	1.6 6	1.87	1.8 9	1.82	1.90	1.68	1.31	1.66	1.58
Indirect PO Attainment	**2.03**	**2.12**	**2.10**	**2.0 3**	**1.94**	**2.0 8**	**2.13**	**2.1 6**	**2.12**	**2.20**	**2.07**	**2.01**	**2.03**	**2.02**

4. Assessment of Overall Program Outcomes

Program Outcome	Direct attainment (in Levels)	Indirect Attainment (in Levels)	Total attainment (in Levels)	Target attainment level	Gap	Action taken
PO1 Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems	**2.29**	**20.3**	**2.23**	**2.2**	**-0.03**	Students are motivated to learn complex analytical/ mathematical concepts and apply them in real life problem solving.
PO2 Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems	**2.34**	**2.12**	**2.29**	**2.2**	**-0.09**	Industrial visits are expected to help students to further

reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.						gain knowledge on complex engineering problems.
PO3 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.	**2.26**	**2.10**	**2.22**	**2.2**	**-0.02**	Students are motivated to include all standard parameters and constraints according to National & International safety norms and to address environmental concerns, while focussing oninnovative designs for their projects.
PO4 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.	**2.25**	**2.03**	**2.20**	**2.2**	**0.00**	Students are motivated to further gain deep knowledge about research in electronics circuits and devices.
PO5 Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	**2.31**	**1.94**	**2.23**	**2.2**	**-0.03**	Students are also encouraged to develop software based projects.
PO6 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.	**2.23**	**2.08**	**2.20**	**2.2**	**0.00**	Industrial visits, tour and some humanities based courses can be added in the curriculum.
PO7 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.	**2.29**	**2.13**	**2.25**	**2.2**	**-0.05**	Students are encouraged to indulge in projects, in which global and environmentalissues are improved, with respect to effective electronics circuit

						designing and miniaturization of circuits.
PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	**1.99**	**2.16**	**2.01**	**2.2**	**0.19**	Career readiness program, corporate lectures and motivational talks are arranged for the students.
PO9 Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**	**2.25**	**2.12**	**2.22**	**2.2**	**-0.02**	Extracurricular activities such as debates, technical and cultural events will be organized for honing communication skills of students while teaching them to work as a team.
PO10 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.	**2.30**	**2.20**	**2.27**	**2.2**	**-0.07**	Soft skills training is imparted to students to enhance various aspects ofcommunication/technical talks by group discussions, presentations and new learning outcomes.
PO11 Project management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	**2.10**	**2.07**	**2.10**	**2.2**	**0.10**	Awareness is created among the student regarding the management principles andmanaging projects through webinar, conclave etc.
PO12 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.	**2.32**	**2.01**	**2.25**	**2.2**	**-0.05**	Students are encouraged to learn some advanced level courses that have relevance throughout their careers and have long term benefits.
PSO1 Graduates will be able to clearly understand the basic concepts and applications in the field of Electronics/ Electronics & Telecommunication Engineering and to apply them in various areas, like Electronics, Communications, Signal processing, VLSI, Embedded	**2.24**	**2.03**	**2.21**	**2.2**	**-0.01**	Workshops for fundamental of electronics, emerging technologies, technical writing, and simulation of electronic circuits are being organised. More hardware

systems etc., in the design and implementation of complex systems.						based projects are being undertaken.
PSO2 Graduates will be able to formulate, plan, administrate and execute projects in the various field of Electronics/ Electronics Telecommunication Engineering viz. digital and analog electronics, telecommunication and control areas etc.	**2.27**	**2.02**	**2.21**	**2.2**	**-0.01**	Students are motivated to take up the real life problems during their project work so that they can design, analyze and find solution which gives exposure to latest technologies.