Batch admitted 2022-2026 onwards

B.Tech. I Semester (Electronics Engineering)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.	Duration of Exam
				Theory Slot				Practical Slot										
				End Sem.		Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work & Sessional	Skill Based Mini Project		L	T	P				
				End Term Evaluation	$Proficiency in subject /course													
1.	2100022	BSC	Basic Electrical & Electronics Engineering	50	10	20	20	60	20	20	200	2	1	2	4	Blended	MCQ	1.5 Hrs
2.	2140121	DC	Electronic Engineering Material	50	10	20	20	-	-	-	100	3	-	-	3	Blended	PP	2 Hrs
3.	2140122	DC	Electronic Devices	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
4.	2140123	DC	Network Theory	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
5.	2160122	ESC	Computer Programming	50	10	20	20	60	20	20	200	2	1	2	4	Blended	AO	2 Hrs
6.	2140124	DLC	Devices & Network Lab	-	-	-	-	60	20	20	100	-	-	4	2	Offline	AO	2 Hrs
Total				**250**	**50**	**100**	**100**	**180**	**60**	**60**	**800**	**11**	**4**	**8**	**19**			
6	3000002	Natural Sciences and Skills	Engineering Chemistry	50	10	20	20	-	-	10	-	1	-	2	GRADE	Blended	MCQ	1.5 Hrs
Induction programme of three weeks (MC):Physical activity, Creative Arts,Universal Human Values,Literary,ProficiencyModules,Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																		

$Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences& Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language

Credits of Natural Sciences & Skills will be added in the VI Semester.

MCQ: Multiple Choice Question **AO:** Assignment + Oral **OB:** Open Book **PP:** Pen Paper **SO:** Submission + Oral

Mode of Teaching					Mode of Examination				Total Credits
Theory				Lab	Theory			Lab	
Offline	Online	Blended		Offline	PP	A+O	MCQ	SO	
		Offline	Online						
0	0	10	5	8	9	6	4	0	19
0%	0%	52.63%	26.31%	42.10%	47.36%	31.57%	21.05%	0%	

B.Tech. II Semester (Electronics Engineering)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.	Duration of Exam
				Theory Slot				Practical Slot										
				End Sem.														
				End Term Evaluation	$Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work & Sessional	Skill Based Mini Project		L	T	P				
1.	2100011	BSC	Engineering Mathematics –I	50	10	20	20	-	-	-	100	3	1	-	4	Offline	PP	2 Hrs
2.	2140221	DC	Digital Circuits &Systems	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP	2 Hrs
3.	2140222	DC	Electronic Circuits	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP	2 Hrs
4.	2140223	DC	Signals and Systems	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
5.	2140224	DC	Python Programming	50	10	20	20	60	20	20	200	2	1	2	4	Blended	AO	1.5 Hrs
Total				**250**	**50**	**100**	**100**	**180**	**60**	**60**	**800**	**11**	**5**	**6**	**19**			
6	3000001	Natural Sciences and Skills	Engineering Physics	50	10	20	20	-	-	-	-	1	-	2	GRADE	Blended	MCQ	1.5 Hrs
Summer Internship Project – I (Institute Level) (Qualifier): Minimum two-week duration: Evaluation in III Semester.																		

$Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences& Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language

Credits of Natural Sciences & Skills will be added in the VI Semester.

MCQ: Multiple Choice Question **AO:** Assignment + Oral **OB:** Open Book **PP:** Pen Paper **SO:** Submission + Oral

Mode of Teaching					Mode of Examination				Total Credits
Theory				Lab	Theory			Lab	
Offline	Online	Blended		Offline	PP	A+O	MCQ	SO	
		Offline	Online						
4	0	8	4	6	15	4	0	0	19
21.05%	0%	42.10%	21.05%	31.57%	78.94%	21.05%	0%	0%	

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Department of Electronics Engineering

Scheme of Examination (For Batch admitted in Year 2022-23)

B.Tech. (Electronics Engineering) III Semester *[For batches admitted in Academic Session 2022-23 onwards]*

S. No.	ubject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching (Offline/ Online)	Mode of Exam.
				Theory Slot				Practical Slot									
				End Sem.		Mid Sem. Exam.	Quiz/ Assignment	End Sem	Lab Work & Sessional	Skill Based Mini Project		L	T	P			
				End Term Evaluation	$Proficiency in subject /course												
1.	21000025	BSC	Engg Mathematics-II	50	10	20	20	-	-	-	100	2	1	-	3	Offline	PP
2.	2140320	DC	Analog Communication	50	10	20	20	60	20	20	200	2	1	2	4	Offline	PP
3.	2140322	DC	Analog Integrated Circuits	50	10	20	20	60	20	20	200	2	1	2	4	Offline	PP
4.	2140323	DC	Communication Networks	50	10	20	20	-	-	-	100	2	1	-	3	Offline	PP
5.	2140324	DC	Data Communication	50	10	20	20	-	-	-	100	2	1	-	3	Offline	PP
6.	2140321	DLC	Hardware Lab	-	-	-	-	60	20	20	100	-	-	2	1	Offline	SO
7.	2140316	DLC	Self-learning/ Presentation#	-	-	-	-	-	40	-	40	-	-	2	1	Online +Mentoring	SO
8.		CLC	Novel Engaging Course	-	-	-		50	-	-	50	-	-	2	1	Interactive	SO
9.	2140317	DLC	Summer Internship Project–I (Institute Level Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				**250**	**50**	**100**	**100**	**290**	**100**	**60**	**950**	**10**	**5**	**14**	**22**		
10.	3000003	Natural Science & Skill	Environmental Engineering	50	10	20	20	-	-	-	100	2	-	-	Grade	Online	MCQ
11	1000001	MAC	Indian Constitution and Traditional Knowledge	50	10	20	20	-	-	-	100	2	-	-	Grade	Online	MCQ

$Proficiency in course/subject – includes the weightage towards ability/ skill/ competence /knowledge level /expertise attained /attendance etc. in that particular course/subject

#compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance, assignments and presentation

Mode of Teaching						Mode of Examination					Total Credits
Theory				Lab	NEC	Theory			Lab	SIP/ SLP/ NEC	
Offline	Online	Blended		Offline	Interactive	PP	A+O	MCQ	SO	SO	
		Offline	Online								
17	0	0	0	4	1	**17**	**0**	**0**	**2**	**3**	**22**
77.27%	0	0	0	18.1%	4.54%	77.27%	0%	0%	9.09%	13.63%	Credits %

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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Scheme of Evaluation

B. Tech IV Semester (Electronics Engineering) *(for batch admitted in academic session 2022-23)*

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam	Duration of Exam
				Theory Slot				Practical Slot										
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation			L	T	P				
				End Sem. Exam	$Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab Work & Sessional	Skill Based Mini Project								
1.	2100003	BSC	Engineering Mathematics-III	50	10	20	20	-	-	-	100	3	1	-	4	Blended	PP	2 Hrs
2.	2140411	DC	Digital Communication	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP	2 Hrs
3.	2140412	DC	Linear Control Theory	50	10	20	20	-	-	-	100	3	1	-	4	Blended	PP	2 Hrs
4.	2140413	DC	Microprocessor & Interfacing	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP	2 Hrs
5	2140414	DLC	Software Lab (Introduction to MATLAB)	-	-	-	-	60	20	20	100	-	-	2	1	Offline	SO	-
5.	2140415	DC	Cyber Security	50	10	20	20	-	-	-	100	2	-	-	2	Blended	MCQ	1.5 Hrs
6.	200xxx	CLC	Novel Engaging Course (Informal Learning)	-	-	-		50	-	-	50	-	-	2	1	Interactive	SO	-
Total				**250**	**50**	**100**	**100**	**230**	**60**	**60**	**850**	**12**	**4**	**8**	**20**	-	-	-
7.	3000004	Natural Sciences & Skills	Language	50	10	20	20	-	-	-	100	1	-	-	Grade	Blended	MCQ	1.5 Hrs
8.	1000005	MAC	Project Management & Financing	50	10	20	20	-	-	-	100	2	-	-	Grade	Online	MCQ	1.5 Hrs
Summer Internship Project – II (Institute Level) (Qualifier): Minimum two-week duration: Evaluation in V Semester.																		

$Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject.

Credits of Natural Sciences & Skills will be added in the VI Semester.

Mode of Teaching					Mode of Examination				Total Credits
Theory				Lab	Theory			Lab	
Offline	Online	Blended		Offline	PP	AO	MCQ	SO	
		Offline	Online						
-	-	12	6	2	15	-	3	2	20
-	-	60.00%	30.00%	10.00%	75.00%	-	15.00%	10.00%	100%

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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Scheme of Examination (For the Batch Admitted in the Year 2022-2023)
B.Tech. (Electronics Engineering) V Semester *[For batches admitted in Academic Session 2022-23 onwards]*

S. No	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching (Offline/ Online)	Mode of Exam.
				Theory Slot				Practical Slot									
				End Sem.		Mid Sem. Exam	Quiz/ Assignment	End Sem	Lab Work & Sessional	Skill Based Mini Project		L	T	P			
				End Term Evaluation	$Proficiency in subject /course												
1	2140511	DC	Data Science	50	10	20	20	60	20	20	200	3	-	2	4	Blended	MCQ
2.	2140512	DC	Mobile Communication & 5G Network	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP
3.	2140515	DC	VLSI Design	50	10	20	20	60	20	20	200	3	-	2	4	Blended	PP
4.	2140519	DC	Electromagnetic Theory	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP
5.	2140520	DC	Digital Signal Processing	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP
6.	2140516	DLC	Minor Project-I	-	-	-	-	60	40	-	100	-	-	4	2	Offline	SO
7.	2140517	DLC	Self-learning/ Presentation	-	-	-	-	-	40	-	40	-	-	2	1	Online +Mentoring	SO
8.		CLC	Novel Engaging Course	-	-	-	-	50	-	-	50	-	-	2	1	Interactive	SO
9.	2140518	DLC	Soft Skill Internship (Institute Level Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				**250**	**50**	**100**	**100**	**290**	**120**	**40**	**950**	**11**	**4**	**16**	**23**		
Additional Courses for obtaining Honors/Minor Specialization by desirous students				**Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization**													
compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance, assignments and presentation																	
10	1000006	MAC	Disaster Management	50	10	20	20	-	-	-	100	2	-	-	Grade	Blended	MCQ

Honors	1. Principles and Techniques of Modern Radar Systems 2 Stochastic Control & Communication	1. Hardware modeling using Verilog 2 Analog VLSI Design	1. Nano-Technology, Science and Application 2 Microelectronics: Devices to Circuits
Minors	Control System	Fundamental of Wireless communication	

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(Deemed University)

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Scheme of Evaluation

B. Tech. VI Semester (Electronics Engineering)

(for batch admitted in academic session 2022-23)

No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	^{SS}Mode of Exam.
				Theory Slot				Practical Slot			MOOCs								
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assignment	Exam		L	T	P			
				End Sem. Exam.	$^{\$}$Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project									
1.	2140616	DC	Microcontroller Systems and Applications	50	10	20	20	60	20	20	-	-	200	3	-	2	**4**	Blended	PP
2.	140XXX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	-	25	75	100	3	-	-	**3**	Blended	PP
3.	900XXX	OC	Open Category (OC-1)**	50	10	20	20	-	-	-	-	-	100	3	-	-	**3**	Blended	PP
4.	2140617	MC	Artificial Intelligence & Machine Learning	50	10	20	20	60	20	20	-	-	200	3	-	2	**4**	Blended	MCQ
5.	2140618	DLC	Minor Project-II$^{\#}$	-	-	-	-	60	40	-	-	-	100	-	-	6	**3**	Offline	SO
6.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	-	-	50	-	-	2	**1**	Blended	SO
7		NSS	Natural Sciences & Skills$^{\#\#}$	200	40	80	80	120	40	40	-	-	600	1	-	2	**2***		
Total				**350**	**70**	**140**	**140**	**350**	**120**	**80**	**25**	**75**	**1350**	**13**	**-**	**14**	**20**	**-**	**-**
8.	1000007	**MAC**	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	**MCQ**
Summer Internship-III (On Job Training) for Four weeks duration: Evaluation in VII Semester																			
Additional Course for Honours or minor Specialization				**Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization**															

##Natural Sciences & skills; Engineering Physics / Engineering Chemistry / Environmental Science/ Language

(^Natural Sciences & skills; treated as Mandatory Audit Courses from first to fourth semester and cumulative marks converted as a cluster of credits and awarded in the VI semester)

$^{\$}$proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

^{SS}**MCQ:** Multiple Choice Question ^{SS}**AO:** Assignment + Oral ^{SS}**PP:** Pen Paper ^{SS}**SO:** Submission + Oral

***Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform with credit transfer**

****** **Course run in traditional mode** #The minor project-II may be evaluated by an internal committee for awarding sessional marks.

***This course run through SWAYAM/NPTEL/ MOOC platform**

***DE-1 (SWAYAM/NPTEL/ MOOC platform)**		****Open Category (OC-1)(For students of other branches)**	
140665	Electromagnetic Waves in Guided and Wireless Media	**900116**	Embedded Systems
140662	Digital IC Design	**900117**	Intelligent Control
140663	Fuzzy sets, logic and System & Applications		

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Scheme of Examination (B.Tech. Electronics Engineering)

B.Tech. VII Semester *[For batches admitted in Academic Session 2022-23 onwards*

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam
				Theory Slot				Practical Slot			MOOCs			L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assignment	Exam							
				End Sem. Exam.	$Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project									
1.	21407XX	DE	*Departmental Elective(DE-2)	-	-	-	-	-	-	-	25	75	100	4	-	-	4	Blended	MCQ
2.	21407XX	DE	*Departmental Elective(DE-3)	-	-	-	-	-	-	-	25	75	100	4	-	-	4	Blended	MCQ
3.		OC	#Open Category (OC-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	MCQ
4.	2140704	DLC	5G Communication Lab	-	-	-	-	60	20	20	-	-	100	-	-	6	3	Offline	SO
5.	2140705	DLC	Creative Problem Solving	-	-	-	-	25	25	-	-	-	50	-	-	4	2	Offline	SO
6.	2140703	DLC	**Professional Skills & Competencies	-	-	-	-	40	60	-	-	-	100	-	-	4	2	Offline	SO
7.	2140702	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Interactive	SO
Total				**50**	**10**	**20**	**20**	**185**	**105**	**20**	**50**	**150**	**610**	**11**	**-**	**18**	**20**		
8.		MAC	Universal Human Values & Professional Ethics (UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	PRADE	Blended	MCQ
Additional Course for Honours or minor Specialization				**Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization**															

$Proficiency in subject / course – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained, etc. in that particular course/subject

**** Professional Skills & Competencies will include and prepare the students on coding skills, technical proficiency (industry readiness and higher studies), aptitude, communication & soft skill set, etc.**

***Course will run through SWAYAM/NPTEL platform with credit transfer**

#Course will run through MITS MOOCs

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral

Mode of Teaching			Mode of Examination				
Offline	**Blended**	**Interactive**	**PP**	**AO**	**MCQ**	**SO**	**Total Credits**
7	11	2	0	0	11	9	**20**
35%	55%	10%	0%	0%	55%	45%	**Credits %**

*** This course must be run through SWAYAM/NPTEL/ MOOC**

Department Electives-2 (DE-2) (MOOCS) (21407XX)	Digital Image Processing **(2140751)**	Microwave Engineering **(2140754)**	Fundamentals of Micro and Nanofabrication **(2140755)**
Department Electives-3 (DE-3) (MOOCS) (21407XX)	Introduction to Wireless and Cellular Communications **(2140763)**	Fiber Optic Communication Technology **(2140762)**	Real Time Digital Signal Processing **(2140764)**
Open Course-2 (OC-2)	Consumer Electronics		

^{SS}**MCQ:** Multiple Choice Question ^{SS}**AO:** Assignment + Oral ^{SS}**PP:** Pen Paper ^{SS}**SO:** Submission + Oral

Honors	Introduction To Adaptive Signal Processing	VLSI Interconnects	Stochastic Control & Communication	Analog VLSI Design	VLSI Design flow(RTL to GDS)
Minors	Design of Photovoltaic Systems	Microwave Engineering			

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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Scheme of Examination (B.Tech. Electronics Engineering)
B.Tech. VIII Semester *[For batches admitted in Academic Session 2022-23 onwards]*

S.N.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted					MOOCS	Total Marks		Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam
				Theory Slot			Practical Slot										
				End Sem.	Mid Sem. Exam	Quiz/ Assignment	End Sem.	Term Work / Lab Work & Sessional	Assignment	Exams		L	T	P			
1.	**1408XX**	**DE**	**Departmental Elective (DE-4)***	-	-	-	-	-	25	75	100	-	-	-	**3**	Online	**MCQ**
2.	**9006XX**	**OC**	**Open Category Course (OC - 3)**	-	-	-	-	-	25	75	100		-	-	**3**	Online	**MCQ**
3.	**2140804**	**DLC**	**Internship/ Project/ Innovation & start-up*** **	-	-	-	250	150	-	-	400	-	-	18	9	Offline	SO
4.	**2140805**		**Professional Development#**	-	-	-	50		-	-	50	-	-	4	2	Interactive	SO
			Total	**-**	**-**	**-**	**300**	**150**	**50**	**150**	**650**	**-**	**-**	**22**	**17**		
Additional Courses for obtaining Honours or minor Specialization by desirous students			**Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization**														

***All of these courses will run through SWAYAM/NPTEL/ MOOC**
 # Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG program(participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events and technical events)
*****Innovation/ start-up: only for those students who have opted relevant NEC**

List of DEs and OCs:

Department Electives-1 (DE-4) (1408XX)	Fundamental of Power Electronics (2140854)	FPGA based Signal Processing Systems (2140855)	Photonic integrated circuit (2140856)
Open Course-3 (OC-3)	Integrated Circuits and Applications(900604)	Sensors and Actuators (900602)	