

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Department of Electronics Engineering

## Scheme of Examination for batch admitted in Academic Session 2020-2021

B.Tech. (Electronics Engineering/ Electronics and Telecommunication Engineering) I Semester

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				L	T	P			
				End Sem.		Mid Sem. Exam.	Quiz/ Assignment	End Sem	Lab Work & Sessional	Skill Based Mini Project							
				End Term Evaluation	Proficiency in subject /course												
1.	100013	BSC	Engineering Physics	50	10	20	20	60	40	-	200	2	1	2	4	Blended (2/1)	MCQ
2.	100020	ESC	Basic Civil Engineering & Mechanics	50	10	20	20	-	-	-	100	2	1	-	3	Blended (2/1)	PP
3.	100021	ESC	Basic Mechanical Engineering	50	10	20	20	-	-	-	100	2	1	-	3	Blended (2/1)	MCQ
4.	100022	ESC	Basic Electrical & Electronics Engineering	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	MCQ
5.	100023	ESC	Basic Computer Engineering	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	AO
6.	140111/ 200111	ESC	Electronics Workshop	-	-	-	-	60	20	20	100	-	-	2	1	Offline (1/0)	SO
Total				250	50	100	100	240	80	80	900	10	5	8	19		
Induction programme of three weeks (MC):Physical activity, Creative Arts, Universal Human Values,Literary,Proficiency Modules,Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																	
*Proficiency in course/subject – includes the weightage towards ability/ skill/ competence /knowledge level /expertise attained /attendance etc. in that course/subject																	

<sup>3</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competence /knowledge level /expertise attained /attendance etc. in that particular course/subject

Mode of Teaching					Mode of Examination					Total Credits
Theory				Lab	Theory					
Offline	Online	Blended			PP	A+O	MCQ	SO		
		Offline	Online							
0	0	10	5	8	3	4	11	1	19	
0%	0%	52.63%	26.31%	42.10%	15.78%	21.05%	57.89%	5.26%		

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ACADEMICS  
M.I.T.S  
GWALIOR

*Handwritten signatures and dates:*  
*Shubhi*  
*Rana*  
*24.02.22*  
 Dr. Laxmi Shrivastava (HOD)

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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Department of Electronics Engineering

## Scheme of Examination For batch admitted in Academic Session 2020-2021

B.Tech. (Electronics Engineering/ Electronics and Telecommunication Engineering) II Semester

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							
				End Term Evaluation	Proficiency in subject /course												
1.	100011	BSC	Engineering Mathematics –I	50	10	20	20	-	-	-	100	3	1	-	4	Offline (4/0)	PP
2.	140211/ 200211	DC	Electronics Devices	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
3.	140212/ 200212	DC	Engineering Materials	50	10	20	20	-	-	-	100	3	1	-	4	Blended (3/1)	PP
4.	100015	HSMC	Energy, Environment, Ecology & Society	50	10	20	20	-	-	-	100	3	-	-	3	Online (0/3)	MCQ
5.	100016	HSMC	Technical Language	50	10	20	20	-	-	-	100	3	-	-	3	Blended (2/1)	PP
6.	100017	HSMC	Language Lab	-	-	-	-	60	20	20	100	-	-	2	1	Offline (2/0)	SO
Total				250	50	100	100	120	40	40	700	14	3	4	19		
Summer Internship Project – I (Institute Level) (Qualifier): Minimum two-week duration: Evaluation in III Semester																	

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/ competence /knowledge level /expertise attained /attendance etc. in that particular course/subject

Mode of Teaching					Mode of Examination					Total Credits
Theory				Lab	Theory			Lab		
Offline	Online	Blended		Offline	PP	A+O	MCQ	SO		
4	3	Offline	Online							
21.05%	15.78%	36.84%	15.78%	21.05%	78.94%	0%	15.78%	5.26%	19	

*Handwritten:* MITS GWALIOR

*Handwritten signatures and notes:* Dr. Laxmi Shrivastava (HOD), and various other signatures and initials.



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Department of Electronics Engineering

## Scheme of Examination for batch admitted in Academic Session 2020-2021

### B.Tech. (Electronics Engineering/ Electronics and Telecommunication Engineering) III Semester

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							
				End Term Evaluation	Proficiency in subject /course												
1.	100025	BSC	Engineering Mathematics-II	50	10	20	20	-	-	-	100	2	1	-	3	Offline (3/0)	PP
2.	140311/200311	DC	Electronics Circuit Design	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
3.	140312/200312	DC	Network Theory	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
4.	140313/200313	DC	Signals & Systems	50	10	20	20	-	-	-	100	2	1	-	3	Blended (2/1)	PP
5.	140314/200314	DC	Electronics measurement & Instrumentation	50	10	20	20	-	-	-	100	2	1	-	3	Blended (2/1)	PP
6.	140315/200315	DLC	Software Lab Introduction to MATLAB	-	-	-	-	60	20	20	100	-	-	2	1	Offline (1/0)	SO
7.	140316/200316	DLC	*Self-learning/ Presentation	-	-	-	-	-	40	-	40	-	-	2	1	Online +Mentoring	SO
8.		CLC	Novel Engaging Course	-	-	-		60	40		100	-	-	2	1	Interactive	SO
9.	140317/200317	DLC	Summer Internship Project-I (Institute Level Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				250	50	100	100	300	140	60	1000	10	5	14	22		
10.	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									
3	1	8	4	5	1	17	0	0	1	4	22	
13.63%	4.54%	36.36%	18.18%	22.72%	4.54%	77.27%	0%	0%	4.54%	18.18%	Credits %	

Dr. Laxmi Shrivastava (HOD)

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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Department of Electronics Engineering

## Scheme of Examination for batch admitted in Academic Session 2020-2021

### B.Tech. (Electronics Engineering/ Electronics and Telecommunication Engineering) IV Semester

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							
				End Term Evaluation	Proficiency in subject /course												
1.	100003	BSC	Engineering Mathematics-III	50	10	20	20	-	-	-	100	2	1	-	3	Offline (3/0)	PP
2.	140411/ 200411	DC	Digital Circuits & Systems	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
3.	140412/ 200412	DC	Analog Integrated Circuits	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
4.	140413/ 200413	DC	Analog Communication	50	10	20	20	60	20	20	200	2	1	2	4	Blended (2/1)	PP
5.	140414/ 200414	DC	Communication Networks	50	10	20	20	-	-	-	100	3	-	-	3	Online (0/4)	PP
6.	140415/ 200415	DLC	PCB Design Lab	-	-	-	-	60	20	20	100	-	-	2	1	Offline (0/3)	SO
7.	<del>140004</del> 100005	MC	Cyber Security	50	10	20	20				100	2	-	-	2	Online (0/2)	MCQ
8.		CLC	Novel Engaging Course	-	-	-	-	-	50	-	100	-	-	2	1	Interactive	SO
Total				300	60	120	120	240	130	80	1100	13	4	10	22		
Summer Internship Project-II (Softskills Based) for two weeks duration: Evaluation in V Semester																	
9.	1000002	MAC	Biology for Engineers	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

Mode of Teaching						Mode of Examination						Total Credits
Theory				Lab	NEC	Theory			Lab	NEC		
Offline	Online	Blended		Offline	Interactive	PP	A+O	MCQ	SO	SO		
3	6	6	3	4	1	18	0	2	1	1		
13.63%	27.27%	27.27%	13.63%	18.18%	4.54%	81.81%	0%	9.09%	4.54%	4.54%	Credits %	

DEAN (ACADEMICS)  
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Dr. Laxmi Shrivastava (HOD)



# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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## B.Tech. ( Electronics and Telecommunication Engineering) V Semester **Effective for 2020-21, 2021-22 & 2022-23**

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 Examination
				Theory Slot				Practical Slot									
				End Sem.		Mid Sem. Exam.	Quiz/ Assignment	End Sem	Lab Work & Sessional	Skill Based Mini Project							
				End Term Evaluation	Proficiency in subject /course												
1.	200511	MC	Data Science	50	10	20	20	60	20	20	200	3	0	2	4	Blended(2/1)	MCQ
2.	300512	DC	Microprocessor & Interfacing	50	10	20	20	60	20	20	200	2	1	2	4	Blended(2/1)	PP
3.	200513	DC	Linear Control Theory	50	10	20	20	-	-	-	100	2	1	-	3	Blended(2/1)	PP
4.	200514	DC	Digital Communication	50	10	20	20	60	20	20	200	2	1	2	4	Blended(2/1)	PP
5.	200515	DC	Electromagnetic Fields	50	10	20	20	-	-	-	100	2	1	-	3	Blended(2/1)	PP
6.	200516	DLC	Minor Project-I	-	-	-	-	60	40	-	100	-	-	4	2	Offline(2/0)	SO
7.	200517	DLC	Self-learning/ Presentation*	-	-	-	-	-	40	-	40	-	-	2	1	Online +Mentoring	SO
8.		CLC	Novel Engaging Course	-	-	-	-	50	-	-	50	-	-	2	1	Interactive	SO
9.	200518	DLC	Summer Internship Project-II (Institute Level Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				250	50	100	100	350	140	60	1050	11	4	18	24		
Additional Courses for obtaining Honours/Minor Specialization by desirous students							Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization										
10.	1000006	MAC	Disaster Management	50	10	20	20	-	-	-	100	2	-	-	GRADE	Online	MCQ
11.	1000005	MAC	Project Management & Financing	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.

<sup>SS</sup>MCQ: Multiple Choice Question

<sup>SS</sup>AO: Assignment + Oral

<sup>SS</sup>PP: Pen Paper

<sup>SS</sup>SO: Submission + Oral

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

Category	Domain	Subject Names
Hons	Communication and Signal Processing	Principles and Techniques of Modern Radar Systems
	VLSI Design	Signal Processing for mm Wave communication for 5G and beyond
Minor	Control & Sensor Technology	Hardware modeling using VERILOG
	Communication and Signal Processing	System Design Through VERILOG
		Analog Electronic Circuit
		Control System
		Introduction to Wireless and Cellular Communications
		Principles and Techniques of Modern Radar Systems

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## B. Tech. VI Semester Electronics and Telecommunication Engineering

**Effective for academic session 2020-21, 2021-22 & 2022-23**

B. Tech. VI Semester Electronics and AEC																			
Effective for academic session 2020-21, 2021-22 & 2022-23																			
Sl. No.	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching (Online, Offline, Blended)	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.	200615	DC	Digital Signal Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
2.	200616	DC	VLSI Design	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
3.	200617	MC	Artificial Intelligence & Machine Learning	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	MCQ
4.	2006XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MOOC
5.	900XXX	OC	Open Category (OC-1)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	MCQ
6.	200618	DLC	Minor Project-II	-	-	-	-	60	40	-	-	-	100	-	-	4	2	Offline	SO
7.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	-	-	50	-	-	2	1	Interactive	SO
Total				200	40	80	80	290	100	60	25	75	950	15	-	12	21	-	-
Total				200	40	80	80	290	100	60	25	75	950	15	-	12	21	-	-
8.	1000007	MAC	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRA DE	Online	MCQ
Part C: Skill III (On Job Training) for Four weeks duration: Evaluation in VII Semester																			
Specialization																			

**Summer Internship-III (On Job Training) for Four weeks duration: Evaluation in VII Semester**

Permitted to opt for maximum two additional courses for the award of Honors or Minor specialization

Additional Course for Honors or minor Specialization

\*proficiency in course/subject-includes the weight age towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

MCQ: Multiple Choice Question

AO: Assignment + Oral

PP: Pen Paper

SO: Submission + Oral

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

DEAN (ACADEMICS)

M.T.S

Analysis and Design Principles of Microwave Antennas 200664

Department Elective-1 (DE-1) (MOOC) 2006XX	Spread Spectrum Communications and Jamming 200661	Digital IC Design 200662	Fuzzy Sets, Logic and Systems & Application 200663	Analysis and Design Principles of Microwave Antennas 200664
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Open Course-1 (OC-1)	Embedded Systems 900116	Intelligent Control 900117
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# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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## Scheme of Examination (B.Tech. Electronics & Telecommunication Engineering)

### B.Tech. VII Semester [For batches admitted in Academic Session 2020-21 onwards]

S. N.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted							MOOCS		Total Marks	Contact Hours per week			Total Credits	Mode of Teaching (Online, Offline, Blended)	Mode of Exam.
				Theory Slot				Practical Slot											
				End Term Evaluation		Continuous Evaluation		End Sem.	Continuous Evaluation		Assignment	Exams							
				End Sem.	Proficiency in Subject Course				Lab work & Sessionals	Skill based mini project									
						Mid Sem. Exam	Quiz/ Assignment						L	T	P				
1.	2007XX	DE	DE-2	50	10	20	20	-	-	-			100	3	-	-	3	Blended	PP
2.	2007XX	DE	DE -3*	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ
3.	2007XX	DE	DE -4*					-	-	-	25	75	100	3	-	-	3	Online	MCQ
4.		OC	OC-2	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
6.	200704	DLC	Embedded Systems Design lab	-	-	-	-	60	20	20	-	-	100	-	-	6	3	Offline	SO
7.	200702	DLC	Summer Internship Project-III	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Offline	SO
8.	200703	DLC	Creative Problem Solving	-	-	-	-	25	25	-	-	-	50	-	-	6	3	Offline	SO
			Total	100	20	40	40	145	45	20	50	150	610	12	0	16	20		
		MAC	Universal Human Values & professional ethics	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	MCQ

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

\$\$MCQ: Multiple Choice Question

\$\$AO: Assignment + Oral

\$\$PP: Pen Paper

\$\$SO: Submission + Oral

Department Electives-2 (DE-2) (2007XX)		Satellite and Radar Communication Systems (200711)		Antenna and Wave Propagation (200714)		Embedded Systems Design (200715)	
Department Electives-3 (DE-3) (MOOCS) (2007XX)		Microwave Engineering (200754)			An Introduction to Coding Theory (200755)		
Department Electives-4 (DE-4) (MOOCS) (2007XX)		Fiber Optic Communication Technology (200762)			Pattern Recognition and Applications (200763)		
Open Course-2 (OC-2)		Satellite System (910216)			Consumer Electronics (910217)		
	Honors	Introduction To Adaptive Signal Processing			VLSI Interconnects		
	Minors	Design of Photovoltaic Systems			Microwave Engineering		

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

## Scheme of Examination B.Tech. VIII Semester

**[For batches admitted in Academic Session 2020-21 onwards]**

S.N.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted					MOOCS		Total Marks	Contact Hours per week			Total Credits
				Theory Slot			Practical Slot		Assignment	Exams		L	T	P	
				End Sem.	Mid Sem. Exam	Quiz/ Assignment	End Sem.	Term Work Lab Work & Sessional							
1.	1408XX	DE	Departmental Elective-5*	-	-	-	-	-	25	75	100	4	-	-	4
2.	9006XX	OC	Open Course -4	-	-	-	-	-	25	75	100	3	-	-	3
3.	140804	DLC	Internship/Project (DLC-9)	-	-	-	250	150	-	-	400	-	-	12	6
4.	140805		Professional Development <sup>#</sup>	-	-	-	-	50	-	-	50	-	-	2	1
			Total	-	-	-	250	200	50	150	650	07	-	14	14
Additional Courses for obtaining Honours or minor Specialization by desirous students			Permitted to opt for <u>maximum two additional courses</u> for the award of Honours or Minor specialization												

\*All of these courses will run through SWAYAM/NPTEL/ MOOC

<sup>#</sup> 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)

### List of DEs and OCs:

Department Electives-1 (DE-5) (1408XX)	Fundamental of power electronics (140854)	Biomedical Signal Processing (140855)	Power Management Integrated Circuits (140853)
Open Course-4 (OC-4)	Linear Dynamical Systems (900601)	Sensors and Actuators (900602)	

<b>Hons</b>	Cloud Computing and Distributed Systems	Architectural Design of Digital Integrated Circuit	
<b>Minors</b>	Microwave Integrated Circuits	Signal Processing Techniques and its Applications	Computer Vision and Image Processing-Fundamentals and Applications