

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Electrical Engineering Department

**For batches admitted in Academic Session 2018-2019 & 2019-2020**

## Scheme of Examination (B.Tech.)

### GROUP A: I Semester & GROUP B: II Semester

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted			Total Marks	Contact Hours per week			Total Credits		
				End Sem.	Mid Sem Exam.	Quiz/Assignment		End Sem.	Lab work & Sessional	L		T	P
1.	100201	BSC	Engineering Physics (BSC-1)	70	20	10	30	20	2	1	2	4	
2.	100202	HSMC	Energy, Environment, Ecology & Society (HSMC-1)	70	20	10	-	-	3	-	-	3	
3.	100203	ESC	Basic Computer Engineering (ESC-1)	70	20	10	30	20	3	-	2	4	
4.	100204	ESC	Basic Mechanical Engineering(ESC-2)	70	20	10	30	20	3	-	2	4	
5.	100205	ESC	Basic Civil Engineering & Mechanics(ESC-3)	70	20	10	30	20	3	-	2	4	
6.	100206	HSMC	Language Lab. & Seminars(HSMC-2)	-	-	-	30	20	-	-	4	2	
<b>Total</b>				<b>350</b>	<b>100</b>	<b>50</b>	<b>150</b>	<b>100</b>	<b>750</b>	<b>14</b>	<b>1</b>	<b>12</b>	<b>21</b>

Induction programme of first 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

GROUP A: (Electrical, Electronics, Computer Science & Engineering, Information Technology, Electronics & Telecommunication)

GROUP B: (Civil, Mechanical, Chemical, Biotech, Automobile)

01 Theory Period = 1 Credit; 02 Practical Periods = 1 Credit

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Electrical Engineering Department

**For batches admitted in Academic Session 2018-2019 & 2019-2020**

## Scheme of Examination (B.Tech.)

### GROUP A: II Semester & GROUP B: I Semester

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted			Total Marks	Contact Hours per week			Total Credits		
				End Sem.	Theory Slot Mid Sem.	Quiz/ Assignment 1		End Sem. Practical Slot	Lab work & Sessional	L		T	P
1.	100101	BSC	Engineering Chemistry (BSC-2)	70	20	10	30	20	3	-	2	4	
2.	100102	BSC	Mathematics-I (BSC-3)	70	20	10	-	-	3	1	-	4	
3.	100103	HSMIC	Technical English (HSMIC-3)	70	20	10	30	20	3	-	2	4	
4.	100104	ESC	Basic Electrical & Electronics Engineering (ESC-4)	70	20	10	30	20	3	-	2	4	
5.	100105	ESC	Engineering Graphics (ESC-5)	70	20	10	30	20	3	-	2	4	
6.	100106	ESC	Manufacturing Practices (ESC-6)	-	-	-	30	20	-	-	-	1	
<b>Total</b>				<b>350</b>	<b>100</b>	<b>50</b>	<b>150</b>	<b>100</b>	<b>750</b>	<b>15</b>	<b>1</b>	<b>10</b>	<b>20</b>

Summer Internship Project -1 (Institute Level) (Qualifier): Minimum two-week duration

GROUP A: (Electrical, Electronics, Computer Science & Engineering, Information Technology, Electronics & Telecommunication)

GROUP B: (Civil, Mechanical, Chemical, Biotech, Automobile)

01 Theory Period = 1 Credit; 02 Practical Periods = 1 Credit

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Electrical Engineering Department

**For batches admitted in Academic Session 2018-2019 & 2019-2020**

## Scheme of Examination

### B.Tech. III Semester (Electrical Engineering) *For batch admitted in Academic Session 2018-2019 & 2019-2020*

Maximum Marks Allotted

S.No.	Subject Code	Category Code	Subject Name	Theory Slot			Practical Slot		Total Marks	Contact Hours per week			Total Credits
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional		L	T	P	
1.	100001	BSC <i>Engg.</i>	Mathematics-II (BSC-4)	70	20	10	-	-	100	3	1	-	4
2.	130301	DC	Electromagnetic Field Theory (DC-1)	70	20	10	-	-	100	3	1	-	4
3.	130302	DC	Measurement & Instrumentation (DC-2)	70	20	10	30	20	150	3	-	2	4
4.	130303	DC	Network Analysis (DC-3)	70	20	10	30	20	150	3	-	2	4
5.	130304	DC	Analog Electronics (DC-4)	70	20	10	30	20	150	-	-	2	1
6.	130305	DLC	Software Lab-1* (DLC-1)	-	-	-	-	25	25	-	-	2	1
7.	130306	SEMINAR/SELF STUDY	Self-learning/Presentation (SWAYAM/NPTEL/MOOC) <sup>5</sup>	-	-	-	-	25	25	-	-	4	2
8.	130307-130309	DLC	Summer Internship Project-1 (Institute Level) (Evaluation) (DLC)	-	-	-	25	25	750	15	2	14	24
Total				350	100	50	145	105	1000	3	-	-	-
9.	100002 <sup>8</sup>	MC	Biology for Engineers (Audit Course) (MC)	70	20	10	-	-	100	3	-	-	-
NSS/NCC				Qualifier									

<sup>5</sup> Compulsory registration for one online course using SWAYAM/NPTEL/MOOC, evaluation through attendance, assignments and presentation.

<sup>6</sup> Course will run for Group A/B in III/IV semester respectively (Passing is optional, however a separate marksheet will be issued to those who qualify)

<sup>7</sup> Virtual Lab to be conducted along with the traditional lab

GROUP A: (Electrical, Electronics, Computer Science & Engineering; Information Technology, Electronics & Telecommunication) & GROUP B: (Civil, Mechanical, Chemical, Biotech, Automobile)

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Electrical Engineering Department

**For batches admitted in Academic Session 2018-2019 & 2019-2020**

## Scheme of Examination (B.Tech.)

### B.Tech. IV Semester (Electrical Engineering)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Cre diits
				Theory Slot			End Sem.	Practical Slot			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment		Term work	Lab Work & Sessional					
1.	100003	BSC	Mathematics- III (BSC-5)	70	20	10	-	-	100	2	2	-	4	
2.	130401	DC	Digital Electronics & Microprocessor (DC-5)	70	20	10	30	20	150	2	1	2	4	
3.	130402	DC	Electrical Machines-1 (DC-6)	70	20	10	30	20	150	2	1	2	4	
4.	130403	DC	Control System (DC-7)	70	20	10	-	-	100	3	1	-	4	
5.	130404	DC	Power System-I (DC-8)	70	20	10	-	-	100	3	1	-	4	
6.	100004	MC	Cyber Security (MC)	70	20	10	-	-	100	2	1	-	3	
7.	130405	DLC	Software Lab-II* (DLC-2)	-	-	-	30	20	50	-	-	6	3	
Total				420	120	60	90	60	750	14	7	10	26	
NSS/NCC														
Summer Internship Project-II (Soft Skills Based) for two weeks duration: Evaluation in V Semester														

\*This course will run for Group A/ B in IV/III semester respectively.

\*Virtual Lab to be conducted along with the traditional lab

Handwritten signatures and initials in blue ink are present across the page, including names like 'Vijay', 'R', 'A', 'F', 'R', 'M.P. Singh', 'M.I.T.S.', and 'GWALIOR'.

2018-19

**MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR**  
 (A Govt. Aided UGC Autonomous Institute & NAAC Accredited Institute Affiliated to R.G.P.V., Bhopal MP)

**Electrical Engineering Department**  
**For batches admitted in Academic Session 2018-2019 & 2019-2020**

**Scheme of Examination**  
**B.Tech. V Semester (Electrical Engineering)**

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted			Total Marks	Contact Hours per week			Total Credits	
				Theory Slot	Practical Slot	Marks		L	T	P		
1.	100005*	HSMC	Ethics, Economics, Entrepreneurship & Management (HSMC-4)	70	20	10	100	3	-	-	3	
2.	130501	DC	Signals & Systems (DC-9)	70	20	10	100	3	1	-	4	
3.	130502	DC	Power System-II (DC-10)	70	20	10	150	2	1	2	4	
4.	130503	DC	Electrical Machines-II (DC-11)	70	20	10	150	2	1	2	4	
5.	130504	DC	Power Electronics (DC-12)	70	20	10	50	-	-	2	1	
6.	130505	DLC	Minor Project-I <sup>***</sup> (DLC-3)	-	-	-	25	-	-	6	3	
7.	130506	DLC	Summer Internship Project-II (Evaluation) (DLC-4)	-	-	-	25	-	-	2	1	
8.	130507	SEMINAR/SELF STUDY	Self-learning/Presentation (SWAYAM/NPTEL/MOOC) <sup>†</sup>	-	-	-	750	12	4	16	24	
9.	100006 <sup>§</sup>	MC	Indian Constitution & Traditional Knowledge (Audit Course) (MC)	70	20	10	100	3	-	-	-	
Department level activity/workshop/awareness programme to be conducted; certificate of compliance to be submitted by HoD to the Exam Controller through Dean Academics												
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization								

\* Group A/B programmes will offer this course in V/VI Semester respectively.  
 † Group A/B programmes will offer this course in V/VI Semester respectively. (Passing is optional, however a separate marksheet will be issued to those who qualify)  
 ‡ The minor project-I may be evaluated by an internal committee for awarding Sessional marks.  
 § Compulsory registration for one online course using SWAYAM/NPTEL/MOOC, evaluation through attendance, assignments and presentation  
 ¶ GROUP A: (Electrical, Electronics, Computer Science & Engineering; Information Technology, Electronics & Telecommunication)

Handwritten signatures and initials in blue ink, including names like 'Vish', 'H2', and 'R'.

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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

Electrical Engineering Department

**For batches admitted in Academic Session 2018-2019 & 2019-2020**

Scheme of Examination

## B.Tech. VI Semester (Electrical Engineering)

S. No	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				End Sem.	Mid Sem Exam.	Quiz/ Assignment	End Sem.	Lab work & Sessional		L	T	P	
1.	130601	DC	Switchgear & Protection (DC-13)	70	20	10	30	20	150	2	1	2	4
2.	130602	DC	Electrical Engineering Materials (DC-14)	70	20	10	-	-	100	4	-	-	4
3.	130611/ 130612/ 130613	DE	DE (DE-1)	70	20	10	-	-	100	4	-	-	4
4.	130651/ 130652/ 130653	DE	DE* (DE-2)	70	20	10	-	-	100	4	-	-	4
5.	900103	OC	OC (OC-1) <del>Energy Conservation &amp; Management #</del>	70	20	10	-	-	100	2	1	-	3
6.	100007	MC	Disaster Management (MC)	70	20	10	-	-	100	3	-	-	3
7.	130603	DLC	Minor Project-II (DLC-5)	-	-	-	50	50	100	-	-	4	2
Total				420	120	60	80	70	750	19	2	6	24

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 Honours or Minor specialization

Additional Courses for obtaining Honours/ Honours with Minor Specialization by desirous students

\*This course run through SWAYAM/NPTEL/ MOOC platform  
# ECE-1 is only opted by other department students

DE-1			DE-2 (SWAYAM/NPTEL)		
130611	Computer Aided Power System Analysis		130651	Non Conventional Energy Resources (ITTM)	write to Energy (130651)
130612	Industrial Automation		130652	DC Power Transmission Systems (ITTM)	Renewable Energy & Wind and Biomass (130652)
130613	Transducers & Sensors		130653	Fuzzy Logic & Neural Networks	

*Handwritten notes and signatures:*  
 130651 write to Energy (130651)  
 130652 Renewable Energy & Wind and Biomass (130652)  
 130653  
 [Signatures]

Scheme of Examination **For batches admitted in Academic Session 2018-2019**  
B.Tech. VII Semester (Electrical Engineering)

S. No.	Subject Code	Category Code	Subject Name & Title	Theory Slot			Practical Slot		MOOC		Total Marks	Contact Hours per week			Total Credits
				End Sem.	Mid Sem. Exam	Quiz/ Assignment	End Sem. Exam	Lab Work & Sessional	Assignment	Exam		L	T	P	
1.	130711/ 130712/ 130713/ 130714	DE (DE-3)	Electrical Drives/ Renewable Energy Systems / IoT in Microgrid/ Intelligent Sensors and Instrumentation	70	20	10	-	-	-	100	3	-	-	3	
2.	130751/ 130752	DE (DE-4)	DE*	-	-	-	-	-	25	75	100	2	-	-	2
3.	<del>130751</del>	OC	OC-2	70	20	10	-	-	-	100	2	1	-	3	
4.	<del>130751</del>	OC	OC-3	70	20	10	-	-	-	100	3	-	-	3	
5.	100008	MC (IPR)	Intellectual Property Rights (IPR)	70	20	10	-	-	-	100	2	-	-	2	
6.	130704	DLC	Electrical Drives Lab	-	-	-	50	50	-	100	-	-	-	2	
7.	130702	DLC	Summer Internship Project-III (04 weeks) Evaluation	-	-	-	50	50	-	100	-	-	-	2	
8.	130703	DLC	Creative Problem Solving/Industrial Automation & Control Lab	-	-	-	25	25	-	50	-	-	-	1	
Total				280	80	40	125	125	25	75	750	12	1	10	18
Additional Course for Honors or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honors or Minor specialization											

\*This course runs through SW/AV/AM/NPTEL/ MOOC platform

DE-4 (SW/AV/AM/NPTEL)		OC-2 (For students of other branches)	
130751	Introduction to SMART Grid (IITR)	900205	Applications of Electrical Equipment & Motors
130752	Advances in UHV Transmission and Distribution (IISc BLR)	900216	OC-3 (For students of other branches) IoT in Microgrid
		900217	Electric Vehicles

**MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR**  
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute affiliated to RGPV, Bhopal)  
Department of Electrical Engineering

**Scheme of Examination**  
**B.Tech. VIII Semester (Electrical Engineering) For Batch Admitted in 2018**

Sl. No.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted					MOOC		Total Marks	Contact Hours per week			Total Credits	
				Theory Slot			Practical Slot		Assignment	Exam		L	T	P		
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Term Work & Lab Work Sessional								
1.	130851, 130855	DE	DE* (DE-5)	-	-	-	-	-	25	75	100	2	1	-	3	
2.	130861, 130862,	DE	DE* (DE-6)	-	-	-	-	-	25	75	100	2	1	-	2	
3.	900607, 900312	OC	OC* (OC-4)	-	-	-	-	250	-	-	400	-	-	6	3	
4.	130801	DLC	Internship/ Project	-	-	-	-	50	-	-	50	-	-	2	1	
5.	130802	-	Professional Development*	-	-	-	-	250	200	75	225	750	6	2	8	12
<b>Additional Courses for obtaining Honours or minor Specialization by desirous students</b>				<b>Permitted to opt for maximum two additional courses for the award of (i) Honours in parent discipline or (ii) Honours with Minor Specialization in engineering discipline other than the parent discipline.</b>												

DE-5 *(SWAYAM/NPTEL/MOOC)		DE-6 *(SWAYAM/NPTEL/MOOC)		OC-4 *(SWAYAM/NPTEL/MOOC) (For students of other branches)	
130851	Introduction to Internet of Things	130861	Introduction to Soft Computing	900607	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems
130855	Power System Dynamics, Control and Monitoring	130862	Non-conventional Energy Resources	900312	Non-Conventional Energy Resources

\*All of these courses will run through SWAYAM/NPTEL/MOOC  
\*Evaluation will be based on participation/forums 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, MOOCs & technical events)

Electrical\_22/12/2021

