

SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE  
M.TECH POWER ELECTRONICS

✓ SEMESTER -I

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	MAXIMUM MARKS				
			L	T	P			TH	CW	SW	Pr.	Total
1	MA60025	Advanced Engineering Mathematics	3	-	-	3	-	70	30	-	-	100
2	EE60024	Advanced Control Systems	3	-	-	3	-	70	30	-	-	100
3	EE61003	Advanced DC/AC Inverters	3	-	-	3	-	70	30	-	-	100
4		Elective - I	3	-	-	3	-	70	30	-	-	100
5		Elective - II	3	-	-	3	-	70	30	-	-	100
6	EE61453	Lab.-I	-	-	2	-	1	-	-	40	60	100
7	EE61454	Lab.-II	-	-	2	-	1	-	-	40	60	100
8	EE61455	Lab.-III	-	-	4	-	2	-	-	-	50	50
9	EE61498	Comprehensive Viva	-	-	-	-	-	-	-	-	100	100
<b>Total</b>			15	0	8	15	4	350	150	80	270	850

I Semester = 19 - 21 Credits

SEMESTER -II

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	MAXIMUM MARKS				
			L	T	P			TH	CW	SW	Pr.	Total
1	EE61613	Integrated Power Electronics Converters	3	-	-	3	-	70	30	-	-	100
2	EE61614	Solid State Control of Electrical Drives	3	-	-	3	-	70	30	-	-	100
3	EE61612	Power Electronics Supply Systems & Design	3	-	-	3	-	70	30	-	-	100
4		Elective - III	3	-	-	3	-	70	30	-	-	100
5		Elective - IV	3	-	-	3	-	70	30	-	-	100
6	EE61853	Term Paper	-	-	2	-	1	-	-	50	50	100
7	EE61854	Lab-IV	-	-	2	-	1	-	-	40	60	100
8	EE61855	Minor Project & Lab. -V	-	-	4	-	2	-	-	40	60	100
9	EE61898	Comprehensive Viva	-	-	-	-	-	-	-	-	100	100
<b>Total</b>			15	0	8	15	4	350	150	130	270	900

SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE  
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## List of Electives

Elective I		Semester I
S.No	Subject Code	Subject
1	EE61201	Digital System Design
2	EE61203	Components in Power Electronics
3	EE61202	Optimization Algorithms

Elective II		Semester I
S.No	Subject Code	Subject
1	EE61301	Neural Computing System and Applications
2	EE61302	AC Controllers
3	EE61303	Reliability Engg.

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Elective III		Semester II
S.No	Subject Code	Subject
1	EE61709	Off-grid Wind Energy Conversion Systems
2	EE61710	Power Electronics Applications to Power System
3	EE61711	Digital Signal Processing

Elective IV		Semester II
S.No	Subject Code	Subject
1	EE61751	HVDC Engineering
2	EE61752	Embedded System Programming
3	EE61753	Control of Grid Interfaced Renewable Energy Conversion Systems

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## SEMESTER - III

S.No.	Subject Code	Subject	Hours per Week			Th.	Pr.	Maximum Marks				
			L	T	P	Credit	Credit	TH	CW	SW	Pr.	Total
1	EE61931	*Industrial Training/Term Paper/Seminar-II	-	-	8	-	4	-	-	50	-	50
2	EE61932	Dissertation Phase-I	-	-	20	-	10	-	-	40	60	100
3	MA61902	**Research Methodology & IPR	2	-	-	2	-	70	30	-	-	100
Total			2	0	28	2	14	70	30	90	60	250

\* Industrial training to be carried out between II and III semester during vacation

\*\* This course can be studied online with prior permission of HOD, however, End-semester examination will be conducted in the Institute.

## SEMESTER - IV

S.No.	Subject Code	Subject	Hours per Week			Th.	Pr.	Maximum Marks				
			L	T	P	Credit	Credit	TH	CW	SW	Pr.	Total
1	EE61952	Dissertation Phase-II	-	-	32	-	16	-	-	80	120	200
Total			0	0	32	0	16	0	0	80	120	200

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✓ SEMESTER - I

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	MAXIMUM MARKS				
			L	T	P			TH	CW	SW	Pr.	Total
1	MA60025	Advanced Engineering Mathematics	3	-	-	3	0	70	30	-	-	100
2	EE60024	Advanced Control System	3	-	-	3	0	70	30	-	-	100
3	EE63011	Power System Operation and Control	3	-	-	3	0	70	30	-	-	100
4		Elective - I	3	-	-	3	0	70	30	-	-	100
5		Elective - I	3	-	-	3	0	70	30	-	-	100
6	EE63453	Lab - I	-	-	2	-	1	-	-	40	60	100
7	EE63454	Lab - II	-	-	2	-	1	-	-	40	60	100
8	EE63455	Lab - III	-	-	4	-	2	-	-	-	50	50
9	EE63498	<b>Comprehensive Viva</b>	-	-	-	-	-	-	-	-	<b>100</b>	100
Total			15	0	8	15	4	350	150	80	270	850

I Semester = 19 - 21 Credits

SEMESTER - II

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	MAXIMUM MARKS				
			L	T	P			TH	CW	SW	Pr.	Total
1	EE63505	Digital Protection of Power System	3	-	-	3	-	70	30	-	-	100
2	EE63513	Power System Planning & Reliability	3	-	-	3	-	70	30	-	-	100
3	EE63506	Power Distribution System	3	-	-	3	-	70	30	-	-	100
4		Elective - III	3	-	-	3	-	70	30	-	-	100
5		Elective - IV	3	-	-	3	-	70	30	-	-	100
6	EE63853	Term Paper	-	-	2	-	1	-	-	50	50	50
7	EE63854	Lab - IV	-	-	2	-	1	-	-	40	60	50
8	EE63855	Minor Project & Lab - V	-	-	4	-	2	-	-	40	60	100
9	EE63898	<b>Comprehensive Viva</b>	-	-	-	-	-	-	-	-	<b>100</b>	100
Total			15	0	8	15	4	350	150	130	270	800

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**  
**M.TECH. POWER SYSTEM AND CONTROL**

**List of Electives**

<b>Elective I</b>		<b>Semester I</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	EE63201	Power Electronics Application to Power System
2	EE63202	HVDC Transmission System
3	EE63203	Dynamic Modeling and control of sustainable energy systems

<b>Elective II</b>		<b>Semester I</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	EE63301	Power System Deregulation
2	EE63302	Digital System Design
3	EE63303	Power System Transients

<b>Elective III</b>		<b>Semester II</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	EE63706	Digital Control System
2	EE63707	Advanced Power System Optimization
3	EE63708	Power System Transients

<b>Elective IV</b>		<b>Semester II</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	EE63751	Power Quality
2	EE63752	Distributed Generation and Smart Grid
3	EE63753	Renewable Power Generation Sources

SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE  
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## SEMESTER - III

S.No.	Subject Code	Subject	Hours per Week			Th.	Pr.	Maximum Marks				
			L	T	P	Credit	Credit	TH	CW	SW	Pr.	Total
1	EE63931	*Industrial Training/Term Paper/Seminar-II	-	-	8	-	4	-	-	50	-	50
2	EE63932	Dissertation Phase-I	-	-	20	-	10	-	-	40	60	100
3	MA63902	**Research Methodology & IPR	2	-	-	2	-	70	30	-	-	100
<b>Total</b>			2	0	28	2	14	70	30	90	60	250

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## SEMESTER - IV

S.No.	Subject Code	Subject	Hours per Week			Th.	Pr.	Maximum Marks				
			L	T	P	Credit	Credit	TH	CW	SW	Pr.	Total
1	EE63952	Dissertation Phase-II	-	-	32	-	16	-	-	80	120	200
<b>Total</b>			0	0	32	0	16	0	0	80	120	200