

M.Tech: Power Electronics & Drives

Department of Electrical Engineering

1st Semester

Theory

Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	EMM-101	Advanced Engineering Mathematics	3	1	0	4	4
2	PEM-101	Advanced Power Electronics	3	1	0	4	4
3	PEM-102	Electric Drive & Their Control	4	0	0	4	4
4	PEM-103	Elective – I	4	0	0	4	4
5	PEM-104	Elective - II	4	0	0	4	4

Practical

Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	PEM-191	Laboratory I	0	0	3	3	2
2	PEM-192	Laboratory II	0	0	3	3	2
3	PEM-193	Seminar I	0	0	3	3	2
		Total of Practical/ Sessional				9	6
		Total of Semester	18	2	9	29	26

Elective I

- Linear System Theory PEM 103(a)
- Power System Planning and Reliability - PEM 103 (b)
- Embedded System Design – PEM 103 (c)

Elective II

- Optimization Techniques - PSM 104 (a)
- Soft Computing Technique - PSM 104 (b)
- Digital Signal Processing - PSM 104 (c)
- Object Oriented Programming - PSM 104 (d)

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2nd Semester

Theory

Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	PEM-201	Power Conversion Techniques	3	1	0	4	4
2	PEM-202	Power System Instrumentation	3	1	0	4	4
4	PEM-203	Industrial Control Electronics	4	0	0	4	4
4	PEM-204	Elective – III	4	0	0	4	4
5	PEM-205	Elective - IV	4	0	0	4	4

Practical

Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	PEM-291	Laboratory III	0	0	3	3	2
2	PEM-292	Laboratory IV	0	0	3	3	2
3	PEM-293	Seminar II	0	0	3	3	2
		Total of Practical/ Sessional				9	6
		Total of Semester	17	3	9	29	26

Elective III

- Intelligent Control Techniques - PEM 204(a)
- Integrated Energy Systems - PEM 204 (b)
- Digital signal processing & applications - PSM 204 (c)

Elective IV

- Power Quality - PEM 205(a)
- HVDC Transmission - PEM 205(a)
- Renewable Power Generation and Control – PEM 205 (c)

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3rd Semester

Theory

Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	EMM-301	Introduction to Management	4	0	0	4	4
2	PEM-301	Elective V	3	1	0	4	4
Practical/ Sessional							
Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	PEM-391	Pre-submission Defense of Dissertation	0	0	0	0	4
2	PEM-392	Dissertation (Part I)	0	0	0	20	10
		Total of Sessional				20	14
	Total of Semester		17	3	9	28	22

4th Semester

Sessional							
Sl. No.	Code	Paper	Contact periods per week			Total contact hours	Credit
			L	T	P		
1	PEM-491	Dissertation (Completion)	0	0	0	24	14
2	PEM-492	Post submission defense of Dissertation	0	0	0	0	8
3	PEM-294	Comprehensive Viva-Voce	0	0	0	0	4
		Total of Semester				24	26

Elective V

- Flexible AC Transmission Systems- PEM 301 (a)
- Applications of Power Electronics in Power Systems- PEM 301 (b)
- PWM Converters and Applications- PEM 301(c)