M.Tech: Power System Engineering

Department of Electrical Engineering

University of Engineering & Management Jaipur

Syllabus for M. Tech. EE in Power Systems
University of Engineering and Management, Jaipur
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.	PSM-101	Advanced Power System Analysis	3	1	0	4	4
3.	PSM-102	High Voltage Transmission System	4	0	0	4	4
4.	PSM-103	Elective – I	4	0	0	4	4
5.	PSM-104	Elective - II	4	0	0	4	4

Practical/ Sessional

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

2nd Semester

Theory

Sl. No.	Code	Paper	Contact periods per week			Total Contact hours	Credit
			L	T	P		
1.	PSM-201	Power System Operation and Control	3	1	0	4	4
2.	PSM-202	Power System Instrumentation	3	1	0	4	4
4.	PSM-203	Advanced Power System Protection	4	0	0	4	4
4.	PSM-204	Elective – III	4	0	0	4	4
5.	PSM-205	Elective - IV	4	0	0	4	4

Practical/Sessional:

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

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.	PSM-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.	PSM-391	Pre-submission Defense of Dissertation	0	0	0	0	4
2.	PSM-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.	PSM-491	Dissertation (Completion)	0	0	0	24	14
2.	PSM-492	Post submission defense of Dissertation	0	0	0	0	8
3.	PSM-294	Comprehensive Viva-Voce	0	0	0	0	4
Total of Semester						24	26

Total Credits: 26 + 26 + 22 + 26 = 100

Elective I

i) Power System Planning and Reliability - PSM 103 (a)
ii) Power System Apparatus - PSM 103 (b)
iii) Power Quality - PSM 103 (c)

Elective II

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

Elective III

i) Power System Transient – PSM 204 (a)
ii) Flexible A.C. Transmission System - PSM 204 (b)
iii) Advanced Electrical Drives - PSM 204 (c)

Elective IV

i) Advanced Control System- PSM 205 (a)
ii) Modeling and Simulation of dynamic systems - PSM 205 (b)
iii) Advanced Microprocessor and Microcontroller – PSM 205 (c)

Elective V

i) Non-conventional Energy - PSM 301 (a)
ii) **Power System Harmonics - PSM 301 (b)**
iii) **Energy Management and Audit – PSM 301 (c)**