

Maulana Azad National Institute of Technology, Bhopal – 462003
Electrical Engineering Department

M Tech in Power System

SCHEME OF STUDY (January 2021)

First Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
PS 101	Soft Computing Techniques in Power System	3	-	-	3
PS 102	Advanced Power System Analysis	3	-	-	3
PS 103	Advanced Power System Protection	3	-	-	3
PS 104	Reactive Power Compensation	3	-	-	3
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
PS 105	Soft Computing Lab.	-	-	2	1
PS 106	Seminar-1	-	-	2	1
PS 107	Communications Skill NPTEL/MOOC/ Humanities Deptt.	2	-	-	2
Total Hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
PS 201	Modern Control System	3	-	-	3
PS 202	Modern trends in power system operations	3	-	-	3
PS 203	Power System Stability	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
PS 204	Advanced Power System Lab	-	-	2	1
PS 205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
PS 206	Seminar-2	-	-	2	1
Total Hours: 24 Total Credits: 44		Total Semester Credits			22

Third Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
PS 301	Dissertation Phase-I	-	-	32	16
Total Hours: 32 Total Credits: 60		Total Semester Credits			16

Fourth Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
PS 401	Dissertation Phase-II	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Electives A		List of Electives B	
PS501	Computer Applications in Power Systems	ED101	Evolutionary Techniques
PS502	Power System Economics	ED102	Power Electronics Convertors
PS503	Modeling of Power System Components	ED103	Advanced Electrical Drives
PS504	Power System Planning and Management	ED104	Modeling & Analysis of Electrical Machines
PS505	Smart Grid Technologies	List of Electives C	
PS506	Power Quality Control Technologies	EN202	Solid Waste Management
PS507	High Voltage Engineering	GE203	Reinforced Soil Structures
PS508	Integrated Energy System	GI201	Basic Concepts of GIS
PS509	EHV AC and DC Transmission	HY201	Characteristics of Hydraulic Machines
PS510	Power System Transients	ST203	Theory of Plates & Shells
PS511	Optimization in Renewable Energy System	TR201	Highway Construction & Maintenance
PS512	Economics of Regulation and Restructuring of Energy Industry	WR203	Ground Water Engineering
PS513	Distributed Power Systems	ID203	Advanced Product Design
PS514	Power System Optimization	IT202	Failure Analysis & Prevention
PS515	Smart Energy Management Systems	AM202	Advanced Composite Materials
PS516	Wide Area Measurements and their applications	SV203	Theory of Vibration II
PS517	Energy Management Systems and SCADA	TH202	Thermal Environmental Engineering
PS518	Electrical Vehicular Technology	VE202	VLSI Technology
		DC203	Digital Image Processing
		AC203	Optimization Techniques
		AI202	Deep Learning
		CN203	Graph Theory & Network Algorithm
		IS201	Applied Cryptography
		MS202	Deformation Behavior of Materials
		CH203	Industrial Safety & Hazard Management

		HS1204	Housing Finance
		UP1203	Infrastructure Planning
		NT201	Nano Structures Characterization Techniques
		BI203	Optimization Techniques & Graph
		CSB201	Mathematical Modeling & Simulation of Biological Systems
		RE202	Solar Energy Systems
		ES202	Energy Management in Buildings
		BIO201	Cheminformatics & Drug Designing

Group A: Program Electives.

Group B: Departmental Electives.

Group C: Open Electives.
{It may also be opted as NPTEL Course after approval from Chairman Senate}