



Department of Electrical Engineering
M.Tech. (Integrated Power Systems)
(2025 Admitted Batch Onwards)

First Semester

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
EE PS 1101	Computer Aided Power System Analysis	3	---	---	3
EE PS 1102	Distribution Automation	3	---	---	3
EE PS 1103	Microgrid Analysis	3	---	---	3
EE PS 1151-1153	Departmental Elective-1	3	---	---	3
EE PS 1161-1163	Departmental Elective-2	3	---	---	3
EE PS 1104	Lab-I: CAPSA Lab	---	---	2	1
EE PS 1105	Lab-II: Power System Protection Lab	---	---	2	1
EE PS 1106	Seminar-I	---	---	2	1
EE PS 1107	MinorProject-1(Self Learning)	---	---	4	2
HS 1101	Communication Skill (Audit Course)	2	---	---	2
Total Hours:27 Cumulative Total Credits:20		Total Semester Credits			20
*HS 1101 Communication Skills 02 Credits (Not Counted in SGPA/CGPA calculations)					

Second Semester

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
EE PS 1201	Digital Protection of Power System	3	---	---	3
EE PS 1202	Power System Stability and Control	3	---	---	3
EE PS 1251-1253	Departmental Elective-3	3	---	---	3
EE PS 1261-1263	Departmental Elective-4	3	---	---	3
	Open Elective	3	---	---	3
EE PS 1203	Lab-III: Advance Power System	---	---	2	1
EE PS 1204	Lab-IV: Distribution Automation	---	---	2	1
EE PS 1205	Seminar-II	---	---	2	1
EE PS 1206	Minor Project-2 (Self Learning)	---	---	4	2
Total Hours: 25		Total Semester Credits			20
Cumulative Total Credits: 40					

MAULANA AZAD
NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL—462003

Third Semester

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
EE PS 2101	Dissertation Phase-I	---	---	40	20
Total Hours: 40 Cumulative Total Credits: 60		Total Semester Credits			20

Fourth Semester

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
EE PS 2201	Dissertation Phase-II			40	20
Total Hours: 40 Cumulative Total Credits: 80		Total Semester Credits			20

S. No.	Departmental Elective Groups	
1		
1.	EE PS 1151	Cyber Security of Power System
2.	EE PS 1152	Power System Economics
3.	EE PS 1153	HVDC Transmission
2		
4.	EE PS 1161	Reactive Power Compensation& FACTS
5.	EE PS 1162	AI Applications to Power Systems
6.	EE PS 1163	Renewable Energy Technologies
3		
7.	EE PS 1251	Optimization in Renewable Energy Systems
8.	EE PS 1252	Power System Transients
9.	EE PS 1253	Power Quality
4		

MAULANA AZAD
NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL—462003

10.	EE PS 1261	Advance Control System
11.	EE PS 1262	High Voltage Engineering
12.	EE PS 1263	Research Methodology

S. No.	List of Open Electives C	
1.	ARPF - 581	Introduction to Urban Planning
2.	BSEF – 581	Bioprocess Engineering
3.	BSEF – 582	Biophysics Tools and Techniques
4.	CHEF – 581	Analytical Techniques
5.	CHEF – 582	Green Technology & Processes
6.	CEF – 581	Solid Waste Management
7.	CEF – 582	Basic Concept of GIS
8.	CEF – 583	Road Safety
9.	CSEF – 581	Machine Learning
10.	CSEF – 582	Advanced Data Structures and Algorithms
11.	PHYF – 581	Nanotechnology and Nanoscience
12.	ECEF – 581	Introduction to Fuzzy Logic
13.	ECEF – 582	Neural Networks and its Applications
14.	ECF - 581	Energy Resource Technologies
15.	HUMF – 581	Intellectual Property Rights for Engineers
16.	HUMF – 582	Applied Psychology: Human Centered Design and Engineering
17.	MTHF – 581	Advanced Operations Research
18.	MTHF– 582	Computing Technologies
19.	MEF – 581	Value Engineering
20.	MEF – 582	Design Thinking
21.	MEF - 583	Mechatronics and NDT in Engineering
22.	MMEF – 581	Advanced Instrumentation Methods for Material Analysis
23.	MMEF – 582	Smart Materials and their Application
24.	MBAF - 581	Engineering Startup Management

