



NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM

DEPARTMENT OF ELECTRICAL ENGINEERING

M.TECH COURSE STRUCTURE

SPECIALIZATION: POWER AND ENERGY SYSTEMS ENGINEERING

SEMESTERWISE CREDIT DISTRIBUTION:

Semester	1st Semester	2nd Semester	3rd Semester	4th Semester
Credit	18	18	9	11
Total credit = 56				

NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM
Department of Electrical Engineering
M. Tech Course structure
Specialization in POWER AND ENERGY SYSTEMS ENGINEERING

Semester-I

Sl No	Course Code	Course Title	Category	L-T-P	Credit
1.	EEL 2101	Power System Dynamics	DC	3-0-0	3
2.	EEL 2102	Advanced Power Converters	DC	3-0-0	3
3.	EEL 2103	Nonconventional and Distributed Energy Sources	DC	3-0-0	3
4.	EEL 2104	Advanced Power System Protection	DC	3-0-0	3
5.	EEL 2105	Elective-I	DE	3-0-0	3
6.	EEL 2101	Advanced Power Systems Lab	DC	0-0-3	1.5
7.	EEL 2106	Modeling & Simulation Lab.	DC	0-0-3	1.5
		TOTAL		15-0-6	18

Semester-II

Sl No	Course Code	Course Title	Category	L-T-P	Credit
1.	EEL 2201	Power System Interconnection and Control	DC	3-0-0	3
2.	EEL 2202	Energy Storage Systems	DC	3-0-0	3
3.	EEL 2203	Flexible AC Transmission Systems	DC	3-0-0	3
4.	EEL 2204	Elective-II	DE	3-0-0	3
5.	EEL 2205	Elective-III	DE	3-0-0	3
6.	EEL 2202	Power and Energy Systems Lab	DC	0-0-3	1.5
7.	EEL 2203	Mini Project	DC		1.5
		TOTAL		15-0-3	18

Semester-III

Sl No	Course Code	Course Title	Category	L-T-P	Credit
1.	EET 2301	Project Phase-I	DC		9
		TOTAL			9

Semester-IV

Sl No	Course Code	Course Title	Category	L-T-P	Credit
1.	EET 2401	Project Phase-II	DC		11
		TOTAL			11

LIST OF DEPARTMENTAL ELECTIVES: for SEMESTER - I

Sl. No	Course Code	Course Title	Category	L-T-P	Credit
1	EEL XX11	HVDC Transmission	DE	3-0-0	3
2	EEL XX12	Optimization Techniques	DE	3-0-0	3
3	EEL XX13	Power Quality	DE	3-0-0	3
4	EEL XX14	SCADA system and Applications	DE	3-0-0	3
5	EEL XX15	Modern Control Systems	DE	3-0-0	3
6	EEL XX16	Smart Grid Planning & Operation	DE	3-0-0	3
7	EEL XX17	Advanced Electric drives	DE	3-0-0	3

LIST OF DEPARTMENTAL ELECTIVES: for SEMESTER - II

Sl. No	Course Code	Course Title	Category	L-T-P	Credit
1	EEL XX21	Soft Computing Techniques and Applications	DE	3-0-0	3
2	EEL XX22	Modeling and Control of Power Electronic Converters	DE	3-0-0	3
3	EEL XX23	Digital Control Systems	DE	3-0-0	3
4	EEL XX24	Machine Learning and Deep Learning	DE	3-0-0	3
5	EEL XX25	Numerical Optimization	DE	3-0-0	3
6	EEL XX26	Deregulated Smart Grids	DE	3-0-0	3
7	EEL XX27	Microgrid Dynamics and Control	DE	3-0-0	3
8	EEL XX28	Advanced Power Electronics and Drives	DE	3-0-0	3
9	EEL XX29	Grid Integration of Electric Vehicles	DE	3-0-0	3
10	EEL XX30	Cloud Computing and Big Data Analytics in Smart Grids	DE	3-0-0	3
11	EEL XX31	Smart Electrical Distribution System	DE	3-0-0	3
12	EEL XX32	High Voltage & Insulation Engineering	DE	3-0-0	3
13	EEL XX33	Analysis of Power Converter	DE	3-0-0	3
14	EEL XX34	Adaptive and Robust Control Systems	DE	3-0-0	3
15	EEL XX35	smart appliances and internet of things	DE	3-0-0	3

DC: Departmental Core**DE: Departmental Elective**