



# **NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM**

## **DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING M.TECH COURSE STRUCTURE AND SYLLABUS**

### **SPECIALIZATION: POWER ELECTRONICS AND DRIVES**

#### **SEMESTERWISE CREDIT DISTRIBUTION:**

<b>Semester</b>	<b>1<sup>st</sup> Semester</b>	<b>2<sup>nd</sup> Semester</b>	<b>3<sup>rd</sup> Semester</b>	<b>4<sup>th</sup> Semester</b>
<b>Credit</b>	<b>36</b>	<b>36</b>	<b>16</b>	<b>24</b>
<b>Total credit = 112</b>				

**NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM**  
**Department of Electrical and Electronics Engineering**  
**M.Tech Course structure**  
**Specialization in Power Electronics and Drives**

**Semester-I**

Sl No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	EEL2101	Advanced Power Electronics-I	DC	3-0-0	6
2.	EEL2102	Modeling and Analysis of Electrical Machines	DC	3-0-0	6
3.	EEL2103	Power System Analysis and Dynamics	DC	3-0-0	6
4.	EEL2104	Modern Control Systems.	DC	3-0-0	6
5.	EEL2105	Elective-I	DE	3-0-0	6
6.	EEL2106	Advanced Power Electronics Lab	DC	0-0-3	3
7.	EEL2107	Modeling & Simulation Lab.	DC	0-0-3	3
		<b>TOTAL</b>		15-0-6	36

**Semester-II**

Sl No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	EEL2201	Advanced Power Electronics-II	DC	3-0-0	6
2.	EEL2202	Advanced Electric Drives	DC	3-0-0	6
3.	EEL2203	Flexible AC Transmission Systems	DC	3-0-0	6
4.	EEL2204	Elective-II	DE	3-0-0	6
5.	EEL2205	Elective-III	DE	3-0-0	6
6.	EEL2206	Advanced Electric Drives Lab	DC	0-0-3	3
7.	EEL2207	Seminar	DC		3
		<b>TOTAL</b>		15-0-3	36

**Semester-III**

Sl No	Course Code	Course Title	Cat	L-T-P	Credit
1.	EET2301	Project Phase-I	DC		12
2.	EES2301	Seminar & Viva Voice	DC		04
		<b>TOTAL</b>			16

## Semester-IV

Sl No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	EET2401	Project Phase-II	DC		16
2.	EES2401	Seminar & Viva Voice	DC		08
		<b>TOTAL</b>			24

## List of Electives

Sl. No	Subject Name	Category	L-T-P	Credit
1	Renewable Energy Systems	DE	3-0-0	6
2	Soft Computing Techniques and Applications	DE	3-0-0	6
3	Optimization Techniques	DE	3-0-0	6
4	Advanced Microprocessor and Microcontroller	DE	3-0-0	6
5	Power Quality	DE	3-0-0	6
6	SCADA system and Applications	DE	3-0-0	6
7	HVDC Transmission	DE	3-0-0	6
8	Special Electrical Machines	DE	3-0-0	6
9	Modeling and Control of Power Electronic Converters	DE	3-0-0	6
10	Embedded System	DE	3-0-0	6

**DC:** Departmental Core

**DE:** Departmental Elective