

**Annexure-I**  
**NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM**  
Department of Mechanical Engineering  
M.Tech Course Structure  
Specialization: **Thermal Engineering**

**Semester-I**

Sl. No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MAL2101	Advanced Mathematics	DC	3-0-0	6
2.	MEL2101	Advanced Thermodynamics	DC	3-0-0	6
3.	MEL2102	Advanced Fluid Mechanics	DC	3-0-0	6
4.	MEL2103	Computational Fluid Flow and Heat Transfer	DC	3-0-0	6
5.	MEL21XX	Elective-I	DE	3-0-0	6
6.	MEP2104	Fluid-Thermal Lab	DC	0-0-3	3
7.	MEP2105	Seminar-I	DC	0-0-3	3
<b>Total Credits</b>					<b>36</b>

**List of Electives\*\* for 1<sup>st</sup> Semester**

Sl.No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MEL2106	Engine Combustion and Emissions	DE	3-0-0	6
2.	MEL2107	Alternative Energy Sources	DE	3-0-0	6
3.	MEL2108	Gas Turbines and Jet Propulsion	DE	3-0-0	6
4.	MEL2109	Refrigeration and Air Conditioning	DE	3-0-0	6

**\*\* As per the requirement electives may be modified.**

**Semester-II**

Sl.No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MEL2210	Research Methodology and IPR	DC	3-0-0	6
2.	MEL2211	Advanced Heat Transfer	DC	3-0-0	6
3.	MEL22XX	Elective-II	DC	3-0-0	6
4.	MEL22XX	Elective-III	DC	3-0-0	6
5.	MEL22XX	Elective-IV	DE	3-0-0	6
6.	MEP2212	Computational Lab	DC	0-0-3	3
7.	MEP2213	Seminar-II	DC	0-0-3	3
<b>Total Credits</b>					<b>36</b>

**List of Electives\*\* for 2<sup>nd</sup> Semester**

Sl.No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MEL2214	Energy Management	DE	3-0-0	6

2.	MEL2215	Compressible Flow	DE	3-0-0	6
3.	MEL2216	Viscous Fluid Flow	DE	3-0-0	6
4.	MEL2217	Power Plant Engineering and Design	DE	3-0-0	6
5.	MEL2218	Finite Element Methods	DE	3-0-0	6
6.	MEL2219	Fluidization Engineering	DE	3-0-0	6
7.	MEL2220	Optimization Techniques	DE	3-0-0	6
8.	MEL2221	Energy Storage	DE	3-0-0	6
9.	MEL2222	Energy Conservation and Waste Heat Recovery	DE	3-0-0	6
10.	MEL2223	Fundamentals of Microfluidics	DE	3-0-0	6
11.	MEL2224	Soft Computing	DE	3-0-0	6
12.	MEL2225	Entrepreneurship and Management	DE	3-0-0	6

**\*\* As per the requirement electives may be modified.**

### Semester-III

Sl.No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MEP2325	Project	DC		16
<b>Total Credits</b>					<b>16</b>

### Semester-IV

Sl.No	Subject Code	Subject Name	Category	L-T-P	Credit
1.	MEP2426	Project	DC		24
<b>Total Credits</b>					<b>24</b>