



Course Structure
Of
Bachelor of Technology (B. Tech)

Department of Mechanical Engineering
National Institute of Technology Mizoram



यांत्रिक अभियांत्रिकी विभाग

Department of Mechanical Engineering

CLASSIFICATION OF CREDIT POINTS	
Lectures/Tutorial/Lab	Credits
1 Hr Lecture (L) per week	1.0 Credit
1 Hr Laboratory (P) per week	0.5 Credit
1 Hr Tutorial (T) per week	1.0 Credit
AUDIT Course	No Credit

1st Semester:

Sl. No.	Course Code	Course Name	Category	L-T-P	Credit
1	HUL 1101	Communicative English	DC	2-0-0	2
2	MAL 1101	Engineering Mathematics I	DC	3-1-0	4
3	CHL 1101	Engineering Chemistry	DC	3-0-0	3
4	EEL 1101	Basic Electrical Engineering	DC	3-0-0	3
5	MEL 1101	Engineering Mechanics	DC	3-0-0	3
Practical					
1	EEP 1101	Basic Electrical Engineering Laboratory	DC	0-0-3	1.5
2	CHP 1101	Engineering Chemistry Laboratory	DC	0-0-3	1.5
3	MEP 1101	Engineering Mechanics Laboratory	DC	0-0-3	1.5
4	HUP 1101	Language Laboratory	DC	0-0-2	1
5	OBE 1101	Outcome Based Education	DC	1-0-0	AUDIT
TOTAL				15-1-11	20.5

2nd Semester:

Sl. No.	CourseCode	Course Name	Category	L-T-P	Credit
1	ECL 1201	Basic Electronics Engineering	DC	3-0-0	3
2	HUL 1202	Social Science	DC	2-0-0	2
3	MAL 1202	Engineering Mathematics II	DC	3-1-0	4
4	PHL 1201	Engineering Physics	DC	3-0-0	3
5	CSL 1201	Introduction to Computer Programming	DC	3-0-0	3
Practical					
1	MEP 1201	Engineering Drawing	DC	0-0-4	2
2	CSP 1201	Introduction to Computer Programming Laboratory	DC	0-0-3	1.5
3	PHP 1201	Physics Laboratory	DC	0-0-3	1.5
4	MEP 1202	Mechanical Workshop	DC	0-0-3	1.5
5	ECA 1201	Extracurricular Activity	DC	0-0-0	AUDIT
TOTAL				14-1-13	21.5



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3rd Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MEL1301	Material Science	3	0	0	3
2.	MEL1302	Fluid Mechanics- I	2	1	0	3
3.	MEL1303	Strength of Materials	2	1	0	3
4.	MEL1304	Basic Thermodynamics	2	1	0	3
5.	MAL1301	Numerical Methods	3	1	0	4
6.	MEL1305	Machine Drawing	1	0	4	3
Practical						
7.	MEP1301	Fluid Mechanics Laboratory	0	0	2	1
8.	MEP1302	Strength of Materials Laboratory	0	0	2	1
			Total			21

4th Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MAL1401	Numerical Method and Probability Theory	3	1	0	4
2.	MEL1401	Kinematics of Machine	2	1	0	3
3.	MEL1402	Fluid Mechanics- II	2	1	0	3
4.	MEL1403	Applied Thermodynamics	2	1	0	3
5.	MEL1404	Advanced Solid Mechanics	2	1	0	3
6.	MEL1405	Manufacturing Science and Technology	3	0	0	3
Practical						
7.	MEP1401	Kinematics of Machine Laboratory	0	0	2	1
8.	MEP1402	Fluid Machinery Laboratory	0	0	2	1
9.	MEP1403	Manufacturing Laboratory- I	0	0	2	1
			Total			22



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5th Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MEL1501	Heat Transfer	2	1	0	3
2.	MEL1502	Machining Technology and Metrology	3	0	0	3
3.	MEL1503	Dynamics of Machines	2	1	0	3
4.	MEL1504	Machine Design- I	2	1	0	3
5.	MEL 1505	Industrial Engineering and Management	3	0	0	3
6.	MEL1506	Sustainable Engineering	3	0	0	3
Practical						
7.	MEP1501	Heat Transfer Laboratory	0	0	2	1
8.	MEP1502	Manufacturing Laboratory- II	0	0	2	1
9.	MEP1503	Dynamics of Machines Laboratory	0	0	2	1
Total						21

6th Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MEL1601	Internal Combustion Engine	3	0	0	3
2.	MEL1602	Automation and Advanced Manufacturing	3	0	0	3
3.	MEL1603	Turbo Machinery	2	1	0	3
4.	MALXXXX	Operation Research	3	0	0	3
5.	MEL1604	Machine Design- II	2	1	0	3
Practical						
6.	MEP1601	IC Engine Laboratory	0	0	2	1
7.	MEP1602	Industrial Training Viva	0	0	2	1
8.	MEP 1603	Thermal Engineering Laboratory	0	0	2	1
9.	MEP 1604	Advance Manufacturing Laboratory	0	0	2	1
10.	MEP 1605	Mini Project	0	0	4	2
Total						21



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7th Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MEL17XX	Elective – I	3	0	0	3
2.	MEL17XX	Open Elective	3	0	0	3
Practical						
3.	MEP1701	Project-I	0	0	10	5
Total						11

List of Electives I for 7th Semester

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
1.	MEL1701	Power Plant Technology	3	0	0	3
2.	MEL1702	Mechanical Measurements	3	0	0	3
3.	MEL1703	Mechanical Vibration	3	0	0	3
4.	MEL1704	Computational Fluid Dynamics	3	0	0	3
5.	MEL1705	Combustion	3	0	0	3
6.	MEL1706	Automobile Engineering	3	0	0	3

List of Open Electives for 7th Semester

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
1.	MEL1707	Renewal Energy Systems	3	0	0	3
2.	MEL1708	Robotics & FMS	3	0	0	3
3.	MEL1709	Finite Element Method	3	0	0	3
4.	MEL 1710	Neural Networks	3	0	0	3



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8th Semester:

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
Theory						
1.	MEL18XX	Elective II	3	0	0	3
2.	MEL18XX	Open Elective	3	0	0	3
Practical						
3.	MEP1801	Project- II	0	0	20	10
4.	MEP 1802	Grand Viva	0	0	2	1
Total						17

List of Electives-III for 8th Semester

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
1.	MEL1801	Introduction to Aerodynamics	3	0	0	3
2.	MEL1802	Experimental Stress Analysis	3	0	0	3
3.	MEL1803	Introduction to Composite Materials	3	0	0	3
3.	MEL1804	Welding and Additive Manufacturing	3	0	0	3
5.	MEL1805	Refrigeration and Air Conditioning	3	0	0	3
6.	MEL1806	Tribology	3	0	0	3

List of Open Electives for 8th Semester

SL.No	Course code	Subject	Teaching Scheme			Credits
			L	T	P	
1.	MEL1807	Product Design and Manufacturing	3	0	0	3
2.	MEL1808	Innovation and entrepreneurship	3	0	0	3
3.	MEL1809	Fuzzy Systems and Genetic Algorithms	3	0	0	3
4.	MEL1810	Project Management	3	0	0	3

SEMESTER	I	II	III	IV	V	VI	VII	VIII
CREDIT POINT	20.5	21.5	21	22	21	21	11	17
TOTAL								155