

B.Tech (Mechanical Engineering) OVERALL CREDIT STRUCTURE

Undergraduate Core (UC)		Undergraduate Elective (UE)	
Category	Credit	Category	Credit
DC	59	DE	25 (Minimum)
BS	19	HM	6(Minimum)
ES	20	OC	25 (Balance)
HM	6	UN	00 (Courses)
Total	104	Total	56
Grand Total UC+UE			160

Course Code	Course	L-T-P	Credit
Basic Sciences (BS)			
SCL102	Applied Mathematics-I	3-2-0	4
SCL103	Applied Mathematics-II	3-2-0	4
SCL201	Applied Mathematics-III*	3-0-0	3
SCL104	Applied Physics	3-0-2	4
SCL105	Applied Chemistry	3-0-2	4
Total			19

Engineering Arts and Sciences (ES)		L-T-P	Credit
CEL101	Engineering Mechanics	3-0-2	4
EEL101	Elementary Electrical Engineering	3-0-2	4
MEL101	Engineering Drawing	3-0-2	4
CSL101	Computer Programming	3-0-2	4
MEP101	Mechanical Workshop	0-0-2	1
EEP101	Electrical Workshop	0-0-2	1
CEL102	Environmental Science	2-0-0	2
Total			20

Humanities and Management (Core) (HM)		L-T-P	Credit
HMP102	Spoken English	1-0-2	2
HMP103	Written English	1-2-0	2
HML101	Social Science	2-0-0	2
Total			6

Non Credit Requirement		L-T-P	Credit
NCN101	NCC#	-	0
NCN102	NSS#	-	0
NCN103	NSO#	-	0
SPB101	Sports-I#	0-0-4	0
SPB102	Sports-II#	0-0-4	0
MED201	Project	-	0
MED301	Literature Review Paper Writing	-	0
MET201	Practical Training	-	0
HMD201	Community Project	-	0

#A student has to opt at least one from NCC, NSS, NSO and sports (I & II both).
Note: Students are required to opt the core courses in the order (*, **, ***)

Departmental Core (DC)		L-T-P	Credit
MEL201	Mechanical Behaviour of Materials*	3-0-0	3
MEL202	Engineering Thermodynamics*	3-2-0	4
MEL203	Fluid Mechanics*	3-0-2	4
MEL204	Solid Mechanics*	3-0-2	4
MEL205	Kinematics of Machines*	3-2-0	4
MEL206	Machine Drawing**	3-2-0	4
MEL207	Casting Welding and Forming**	3-0-2	4
MEL208	Machining and Machine Tools**	3-0-2	4
MEL301	Applied Thermodynamics*	3-0-2	4
MEL302	Fluid Machines**	3-0-2	4
MEL303	Heat and Mass Transfer***	3-0-2	4
MEL304	Dynamics of Machines**	3-0-2	4
MEL305	Metrology and SQC***	3-0-2	4
MEL306	Operations Management***	3-2-0	4
MEL307	Design of Machine Elements***	3-2-0	4

Departmental Elective (DE)		L-T-P	Credit
SCL403	Probability Theory and Statistics	3-0-0	3
MEL308	Mechanical Measurements	3-0-2	4
MEL401	Operations Research Techniques	3-2-0	4
MEL402	Automatic Control	3-0-0	3
MEL403	Fluid Dynamics	3-0-0	3
MEL405	Computer Aided Design	3-2-0	4
MEL406	Finite Element Methods	3-2-0	4
MEL407	Lubrication	3-0-0	3
MEL408	Mechatronics	3-0-2	4
MEL409	Theory of Elasticity	3-0-2	4
MEL410	Mechanical Vibrations	3-0-2	4
MEL411	Robotics	3-0-2	4
MEL412	Automation in Production	3-0-0	3
MEL413	Advanced Manufacturing Techniques	3-0-0	3
MEL414	Power Plant Engineering	3-0-0	3
MEL415	Renewable Energy Sources	3-0-0	3
MEL416	Refrigeration & Air Conditioning	3-0-2	4
MEL417	Automobile Engineering	3-0-2	4
MEL418	IC Engine	3-0-2	4
MEL419	Tool Design	3-2-0	4
MEL420	Machine Tool Design	3-2-0	4
MEL421	Material Resource Planning	3-0-0	3
MEP401	Machine System Design	0-2-4	3
MED401	Major Project Part-I	-	1
MED402	Major Project Part-II	-	3

**M. Tech. (Mechanical Engineering) specialization in Manufacturing Technology
OVERALL CREDIT STRUCTURE**

S. No	Category	Symbol	M. Tech (2-Year) (Credits)
1	PG Core	PC	30
1.1	Departmental Core	DC	13
1.2	Project phase-I	P1	05
1.3	Project phase-II	P2	10
1.4	Seminar	SM	02
2	PG Elective	PE	25
2.1	Specialization Electives	SE	19
2.2	Open Courses	OC	06
TOTAL REQUIREMENT			55 (Minimum)

Postgraduate Core (PC)		L-T-P	Credit
MED501	Project Phase –I	-	05
MED502	Project Phase-II	-	10
MED503	Seminar	-	02
MEL401	Operations Research Techniques	3-2-0	04
MEL 406	Finite Element Method	3-2-0	04
MEL422	Non-Metallic Materials	3-0-0	03
MEL 423	Design and Analysis of Experiments	3-0-0	03
Specialization Elective (SE)		L-T-P	Credit
MEL 411	Robotics	3-0-2	04
MEL 412	Automation in Production	3-0-0	03
MEL 413	Advanced Manufacturing Techniques	3-0-0	03
MEL 421	Material Resource Planning	3-0-0	03
MEL 424	Non Traditional Manufacturing Processes	3-0-0	03
MEL 425	Theory of Plasticity and Metal Forming Processes	3-0-0	03
MEL 426	Advanced Joining Processes	3-2-0	04
MEL 427	Quality Assurance	3-0-0	03
MEL 428	Process Engineering	3-0-0	03
MEL 429	Processing of Composite Materials	3-0-0	03

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1.4	Seminar	SM	02
2	PG Elective	PE	25
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TOTAL REQUIREMENT			55 (Minimum)

Postgraduate Core (PC)		L-T-P	Credit
MED501	Project Phase –I	-	05
MED502	Project Phase-II	-	10
MED503	Seminar	-	02
MEL401	Operations Research Techniques	3-2-0	04
MEL406	Finite Element Method	3-2-0	04
MEL422	Non-Metallic Materials	3-0-0	03
MEL423	Design and Analysis of Experiments	3-0-0	03
Specialization Elective (SE)		L-T-P	Credit
MEL 409	Theory of Elasticity	3-0-2	04
MEL 410	Mechanical Vibrations	3-0-2	04
MEL 411	Robotics	3-0-2	04
MEL 427	Quality Assurance	3-0-0	03
MEL 430	Fracture Mechanics	3-0-0	03
MEL 431	Dynamics of Mechanical Systems	3-0-0	03
MEL 432	Mechanism Design	3-0-0	03
MEL 433	Tribology in Design	3-0-0	03
MEL 434	Modelling and Simulation	3-0-0	03
MEL 435	Design Principles	3-0-0	03