

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur Faculty
of Engineering & Technology**

Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)

I Semester B.E. (Mechanical Engineering)														
Sr.No	Subject	Teaching Scheme				Examination Scheme								
		Hours per				Theory					Practical			
		week												
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
1	Mathematics -I	3	1	-	4	3	70	30	100	45	-	-	-	-
2	Applied Physics	3	1	-	4	3	70	30	100	45	-	-	-	-
3	Engineering Graphics	1	-	-	1	2	35	15	50	23	-	-	-	-
4	Energy & Environment	3	-	-	3	3	35	15	50	23	-	-	-	-
5	Communication & Aptitude skill	2	-	-	2	-	35	15	50	23	-	-	-	-
6	Basic of civil & mechanical	4	-	-	Audit (0)	-	-	50	50	-	-	-	-	-
7	Applied Physics Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
8	Engineering Graphics Lab	-	-	4	2	-	-	-	-	-	25	25	50	25
9	Energy & Environment Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
10	Communication Skill lab	-	-	2	1	-	-	-	-	-	25	25	50	25
11	Induction Program	Three Weeks			-	-	-	-	-	-	-	-	-	-
Total		16	02	10	-	-	245	155	400	-	100	100	200	-
Semester Total		28			19	Marks 600								

II Semester B.E. (Mechanical Engineering)														
Sr No	Subject	Teaching Scheme				Examination Scheme								
		Hours per week				Theory					Practical			
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
1	Mathematics - II	3	1	-	4	3	70	30	100	45	-	-	-	-
2	Applied Chemistry	3	1	-	4	3	70	30	100	45	-	-	-	-
3	Advanced Engineering Material	3	-	-	3	2	35	15	50	23	-	-	-	-
4	Engineering Mechanics	2	-	-	2	2	35	15	50	23	-	-	-	-
5	Basic Electrical Engineering	2	-	-	2	2	35	15	50	23	-	-	-	-
6	Computational Skill	2	-	-	2	2	35	15	50	23	-	-	-	-
7	Applied Chemistry lab	-	-	2	1	-	-	-	-	-	25	25	50	25
8	Advanced Engineering Material lab	-	-	2	1	-	-	-	-	-	25	25	50	25
9	Workshop Practices	-	-	4	2	-	-	-	-	-	25	25	50	25
10	Computational Skill lab	-	-	2	1	-	-	-	-	-	25	25	50	25
11	Indian Culture & Constitution	2	-	-	Audit (0)	-	-	-	-	-	-	-	-	-
Total		17	07	08	-	-	440	110	550	-	100	150	250	-
Semester Total		29			22	Marks 600								
III Semester B.E. (Mechanical Engineering)														
Subject Code	Subject	Teaching Scheme			Examination Scheme									
		Hours per			Theory					Practical				

			we e k											
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
BEME301T	Applied Mathematics – III	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME302T	Kinematics of Machines	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME303T	Fluid Mechanics	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME304T	Manufacturing Processes	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME304P	Manufacturing Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
BEME305T	Engineering Metallurgy	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME305P	Engineering Metallurgy	-	-	2	1	-	-	-	-	-	25	25	50	25
BEME306P	Machine Drawing	-	2	2	4	-	-	-	-	-	50	50	100	50
BEME307P	Technical Report & Seminar	-	-	2	2	-	-	-	-	-	-	50	50	25
Total		15	7	8			280	120	400		125	125	250	
Semester Total		30			28	Marks 650								
IV Semester B.E. (Mechanical Engineering)														
Subject Code	Subject	Teaching Scheme				Examination Scheme								
		Hours per week				Theory					Practical			
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks Univers ity Assess ment	Max. Marks College Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks

BEME401T	Applied Mathematics- IV	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME402T	Engineering Thermodynamics	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME403T	Hydraulic Machines	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME403P	Hydraulic Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
BEME404T	Machining Process	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME404P	Machining Process Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
BEME405T	Mechanics of Material	3	1	-	4	3	80	20	100	40	-	-	-	-
BEME405T	Mechanics of Material Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
BEME406T	Environmental Studies	3	-	-	Audit(0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned)								
BEME407p	Mini Project	-	-	2	2	-	-	-	-	-	-	50	50	25
Total		18	5	8	-		400	100	500	-	75	75	150	-
Semester Total		31			25	Marks 650								
V Semester B.E. (Mechanical Engineering)														
Subject Code	Subject	Teaching Scheme				Examination Scheme								
		Hours per				Theory					Practical			
			wee k											
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
BEME501T	Industrial Economics and Entrepreneurshi p Development	03	01	-	04	03	80	20	100	40	-	-	-	-

BEME502T	Design of Machine Elements	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME503T	Advanced Production Processes	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME504T	Heat Transfer	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME504P	Heat Transfer	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME505T	Mechanical Measurement & Metrology	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME505P	Mechanical Measurement & Metrology	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME506P	Computer Applications – I	-	02	02	04	-	-	-	-	-	50	50	100	50
BEME507P	Industrial Visit	-	-	02	Audit Course									
Total		15	07	08		-	400	100	500	-	100	100	200	-
Semester Total			30		26	Marks 700								
VI Semester B.E. (Mechanical Engineering)														
Subject Code	Subject	Teaching Scheme				Examination Scheme								
		Hours per week				Theory					Practical			
		L	T	P	No. of Credits	Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
BEME601T	Energy Conversion- I	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME602T	Control Systems Engineering	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME603T	Operations	03	01	-	04	03	80	20	100	40	-	-	-	-

	Research													
BEME604T	Mechatronics	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME604P	Mechatronics	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME605T	Dynamics of Machines	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME605P	Dynamics of Machines	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME606T	Functional English	02	-	-	02	02	40	10	50	20	-	-	-	-
BEME607P	Computer Applications - II	-	02	02	04	-	-	-	-	-	50	50	100	50
BEME608P	Industrial Case Study	-	-	02	02	-	-	-	-	-	-	50	50	25
Total		17	07	08	-	-	440	110	550	-	100	150	250	-
Semester Total		32			30	800 Marks								

VII Semester B.E. (Mechanical Engineering)

Subject Code	Subject	Teaching Scheme				Examination Scheme								
		Hours per week			No. of Credits	Theory					Practical			
		L	T	P		Duration of Paper(Hrs.)	Max. Marks University Assessment	Max. Marks College	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Passing Min. Marks
BEME701T	Industrial Engineering	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME702T	Elective-I	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME703T	Computer Aided Design	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME703P	Computer Aided Design	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME704T	Energy Conversion - II	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME704P	Energy Conversion - II	-	-	02	01	-	-	-	-	-	25	25	50	25

BEME705T	Design of Mechanical Drives	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME705P	Design of Mechanical Drives	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME706P	Project Seminar	-	-	03	03	-	-	-	-	-	-	50	50	25
Total		15	05	09	-	-	400	100	500	-	75	125	200	-
Semester Total				29		26	700 Marks							
VIII Semester B.E. (Mechanical Engineering)														
Subject Code	Subject	Teaching Scheme				Examination Scheme								
		Hours per week			No. of Credits	Theory					Practical			
		L	T	P		Duration of Paper (Hrs.)	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks
BEME801T	Industrial Management	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME802T	Elective – II	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME802P	Elective – II	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME803T	Elective – III	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME804T	Automation in Production	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME804P	Automation in Production	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME805T	Energy Conversion - III	03	01	-	04	03	80	20	100	40	-	-	-	-
BEME805P	Energy Conversion - III	-	-	02	01	-	-	-	-	-	25	25	50	25
BEME806P	Project	-	-	06	06	-	-	-	-	-	75	75	150	75
Total		15	05	12		-	400	100	500	-	150	150	300	-
Semester Total				32		29	800 Marks							
	VII Semester													

Elective – I (BEME702T)		
BEME702T1: Industrial Robotics	BEME702T2: Tool Design	BEME702T3: Automobile Engineering
BEME702T4: Power Plant Engineering	BEME702T5: Synthesis Of mechanism	BEME702T6: Material Handling System
VIII Semester		
Elective – II (BEME802T, BEME802P):		
BEME802T1/P1: Finite Element Method	BEME802T2/P2: Computer Integrated Manufacturing	BEME802T3/P3: Industrial Fluid Power
BEME802T4/P4: Management Information Systems	BEME802T5/P5: Refrigeration & Air-Conditioning	BEME802T6/P6: Stress Analysis
Elective – III (BEME803T):		
BEME803T1: Advanced Manufacturing Techniques	BEME803T2: Machine Tool Design	BEME803T3: Renewable Energy Systems
BEME803T4: Mechanical Vibrations	BEME803T5: Advance I.C. Engine	BEME803T6: Tribology

All subjects pertains to Board of Studies in Mechanical Engineering.

