

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

Faculty of Science & Technology

Course Scheme of Bachelor of Engineering (Mechanical Engineering)

Sr. No	Course Category	CREDITS								TOTAL
		SEM-I	SEM II	SEM III	SEM IV	SEM V	SEM VI	SEM VII	SEM VIII	
1	Humanities, Social Sciences & Management courses	3			3	3				9
2	Basic Science courses	9	9	4						22
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	7	13							20
4	Professional core courses			16	17	14	15			62
5	Professional Elective courses relevant to chosen specialization/branch						6	7	7	20
6	Open Electives: Courses from other technical and /or emerging subjects					3		6	3	12
7	Project work, seminar and internship in industry or elsewhere, Industry Training and Skill Development					1	2	6	6	15
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Knowledge Tradition]									0
	TOTAL	19	22	20	20	21	23	19	16	160
	TOTAL MARKS	600	600	650	650	650	700	500	550	4900

Sl. S. Khawale
Dr. S. K. B. O. S. Mechanical Engg.
Chairman

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur

Faculty of Science & Technology

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

I Semester B. Tech (Mechanical Engineering)

I Semester B. Tech (Mechanical Engineering)																	
Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme									
				L	T	P		Theory					Practical				
								Duration of Exam (Hrs)	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1		Basic Science course	Mathematics - I	3	1	-	4	3	30	70	100	45	-	-	-	-	
2		Basic Science course	Applied Physics	3	1	-	4	3	30	70	100	45	-	-	-	-	
3		Engineering Science Courses	Engineering Graphics	1	-	-	1	2	15	35	50	23	-	-	-	-	
4		Engineering Science Courses	Energy & Environment	3	-	-	3	3	15	35	50	23	-	-	-	-	
5		Humanities, Social Sciences &	Communication & Aptitude Skills	2	-	-	2	-	15	35	50	23	-	-	-	-	
6		Engineering Science Courses	Basics of Civil & Mechanical	4	-	-	Audit (0)	-	50	-	50	-	-	-	-	-	
7		Basic Science course	Applied Physics Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
8		Engineering Science Courses	Engineering Graphics Lab	-	-	4	2	-	-	-	-	-	25	25	50	25	
9		Engineering Science Courses	Energy & Environment Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
10		Humanities, Social Sciences &	Communication Skills Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
11		Mandatory Course	Induction Program	Three Weeks			-	-	-	-	-	-	-	-	-	-	
Total				16	2	10	-	-	155	245	400	-	100	100	200	-	
Semester Total				28			19	Marks 600									

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Faculty of Science & Technology

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

II Semester B. Tech (Mechanical Engineering)

II Semester B. Tech (Mechanical Engineering)																	
Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme									
									Theory				Practical				
				L	T	P		Duration of Exam (Hrs)	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1		Basic Science course	Mathematics -II	3	1	-	4	3	30	70	100	45	-	-	-	-	
2		Basic Science course	Applied Chemistry	3	1	-	4	3	30	70	100	45	-	-	-	-	
3		Engineering Science Courses	Advance Engineering Materials	3	-	-	3	2	15	35	50	23	-	-	-	-	
4		Engineering Science Courses	Engineering Mechanics	2	-	-	2	2	15	35	50	23	-	-	-	-	
5		Engineering Science Courses	Basic Electrical Engineering	2	-		2	2	15	35	50	23	-	-	-	-	
6		Engineering Science Courses	Computational Skills	2	-		2	2	15	35	50	23	-	-	-	-	
7		Basic Science course	Applied Chemistry Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
8		Engineering Science Courses	Advance Engineering Materials Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
9		Engineering Science Courses	Workshop Practices	-	-	4	2	-	-	-	-	-	25	25	50	25	
10		Engineering Science Courses	Computational Skills Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
11		Mandatory Course	Indian Culture and Constitution	2	-	-	Audit (0)	-	-	-	-	-	-	-	-	-	
Total				17	2	10	-	-	120	280	400	-	100	100	200	-	
Semester Total				29			22	Marks 600									

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Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
III Semester B. Tech (Mechanical Engineering)

III Semester B. Tech (Mechanical Engineering)																
Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME301T	Basic Science course	Applied Mathematics – III	3	1	-	4	3	30	70	100	45	-	-	-	-
2	BEME302T	Professional core courses	Manufacturing Processes	3	-	-	3	3	30	70	100	45	-	-	-	-
3	BEME302P	Professional core courses	Manufacturing Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
4	BEME303T	Professional core courses	Engineering Thermodynamics	3	1	-	4	3	30	70	100	45	-	-	-	-
5	BEME304T	Professional core courses	Kinematics of Machines	3	1	-	4	3	30	70	100	45	-	-	-	-
6	BEME305P	Professional core courses	Machine Drawing & Solid Modelling	-	1	2	2	-	-	-	-	-	50	50	100	50
7	BEME306P	Professional core courses	Computer Programming	-	1	2	2	-	-	-	-	-	50	50	100	50
8	BEME307P	Mandatory Course	Sports / Yoga / NSS/NCC	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
Total				12	5	9	-	-	120	280	400	-	125	125	250	-
Semester Total				26			20	Marks 650								

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Faculty of Science & Technology

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

IV Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
								Theory					Practical			
				L	T	P		Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME401T	Professional core courses	Machining Processes	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME401P	Professional core courses	Machining Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME402T	Professional core courses	Fluid Mechanics & Hydraulic Machines	3	1	-	4	3	30	70	100	45	-	-	-	-
4	BEME402P	Professional core courses	Fluid Mechanics & Hydraulic Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
5	BEME403T	Professional core courses	Material Science & Engineering	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME404T	Professional core courses	Mechanics of Materials	3	1	-	4	3	30	70	100	45	-	-	-	-
7	BEME404P	Professional core courses	Materials Testing Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
8	BEME405T	Humanities & Social Science	Professional Ethics	3	-	-	3	2	30	70	100	45	-	-	-	-
9	BEME406P	Mandatory Course	Sports /Yoga / NSS/NCC	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				15	2	9	-	-	150	350	500	-	75	75	150	-
Semester Total				26			20	Marks 650								

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Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
V Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME501T	Professional core courses	Heat Transfer	3	1	-	4	3	30	70	100	45				
2	BEME501P	Professional core courses	Heat Transfer Lab	-	-	2	1		-	-	-	-	25	25	50	25
3	BEME502T	Professional core courses	Energy Conversion-I	3	1	-	4	3	30	70	100	45	-	-	-	-
4	BEME503T	Professional core courses	Design of Machine Elements	3	1	-	4	3	30	70	100	45	-	-	-	-
5	BEME503P	Professional core courses	Design of Machine Elements Lab	-	-	2	1		-	-	-	-	25	25	50	25
6	BEME504T	Humanities, Social Sciences & Management courses	Industrial Economics and Management	3	-	-	3	3	30	70	100	45	-	-	-	-
7	BEME505T	Open Elective Course	Open Elective - I	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME506P	Project work, seminar and internship in industry or elsewhere	Industrial Visit*	-	-	2	1	-	-	-	-	-	50	-	50	25
9	BEME507P	Mandatory Course	Performing Art	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				15	3	9	-	-	150	350	500	-	100	50	150	-
Semester Total				27			21	Marks 650								

Sh. Dr. S. K. Chaudhary
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Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
VI Semester B. Tech. (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
								Theory					Practical			
				L	T	P		Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME601T	Professional core courses	Automation in Production	3	1	-	4	3	30	70	100	45	-	-	-	-
2	BEME601P	Professional core courses	Automation in Production Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME602T	Professional core courses	Energy Conversion-II	3	1	-	4	3	30	70	100	45	-	-	-	-
4	BEME602P	Professional core courses	Energy Conversion Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
5	BEME603T	Professional core courses	Dynamics of Machines	3	1	-	4	3	30	70	100	45	-	-	-	-
6	BEME603P	Professional core courses	Dynamics of Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
7	BEME604T	Professional Elective courses	Elective - I	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME605T	Professional Elective courses	Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-
9	BEME606P	Project work, seminar and internship in industry or elsewhere	Skill Development*	-	-	4	2	-	-	-	-	-	50	-	50	25
10	BEME607P	Project work, seminar and internship in industry or elsewhere	Summer Internship**	During Summer Vacation			Audit (0)	-	-	-	-	-	-	-	-	-
11	BEME608P	Mandatory Course	Environment Science	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				15	3	13	-	-	150	350	500		125	75	200	-
Semester Total				31			23	Marks 700								

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Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
VII Semester B. Tech (Mechanical Engineering)-(2023 onwards)

VII Semester B. Tech (Mechanical Engineering)-(2023 onwards)																
Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assesment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME701T	Professional Elective courses	Elective - III	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME702T	Professional Elective courses	Elective - IV	3	-	-	3	3	30	70	100	45	-	-	-	-
3	BEME702P	Professional Elective courses	Elective - IV Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
4	BEME703T	Open Elective Course	Open Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-
5	BEME704T	Open Elective Course	Open Elective - III	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME705P	Project work, seminar and internship in industry or elsewhere	Project - I	-	-	12	6	-	-	-	-	-	50	-	50	25
7	BEME706P	Mandatory Course	Self Development	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				12	0	16	-	-	120	280	400	-	75	25	100	-
Semester Total				28			19	Marks 500								

Sl. No. 1
Dr. S.K. Choudhary
Chairman
B-D-S.
Mech-Engg.

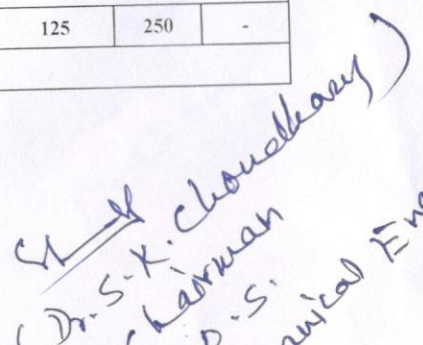
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Faculty of Science & Technology

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

VIII Semester B. Tech(Mechanical Engineering)-(2023 onwards)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
								Theory					Practical			
				L	T	P		Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME801T	Professional Elective courses	Elective - V	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME801P	Professional Elective courses	Elective - V Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME802T	Professional Elective courses	Elective - VI	3	-	-	3	3	30	70	100	45	-	-	-	-
4	BEME803T	Open Elective Course	Open Elective -IV	3	-	-	3	3	30	70	100	45	-	-	-	-
5	BEME804P	Project work, seminar and internship in industry or elsewhere	Project - II	-	-	12	6	-	-	-	-	-	100	100	200	100
6	BEME805P	Mandatory Course	Self Development	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				9	0	16	-	-	90	210	300	-	125	125	250	-
Semester Total				25			16	Marks 550								


 (Dr. S. K. Choudhary)
 Chairman
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