GH raisoni COLLEGE Engineering and Management Nagpur

UG Scheme-2026 (NEP-2020)
B. Tech. (Mechanical Engineering)

Course Code	Name of Course	Course Category	Classroom Instruction (CI) (in hours per semester)		Lab Instruction (LI) (in hours per semester)	Term Work (TW) and Self Learning (SL) (TW+ SL)(in hours per semester)	Total no.of hours per semester	Credits	Evaluation Scheme					
									Theory			Practical		Total Marks
			L	T	P				TAE	CAE	ESE	INT	EXT	
SEMESTER-I (NCrf Level 4.5)														
BSBTSH1TT102ME	Environmental Chemistry	BSC 5	15	--	--	15	30	1	10	15	50	--	--	75
BSBTSH1PI102ME	Environmental Chemistry	BSC 5	--	--	30	--	30	1	--	--	--	25	--	25
BSBTSH3TT103ME	Matrices and Differential Calculus	BSC 1	30	15	--	45	90	3	10	15	50	--	--	75
AEBTSH1TI108ME	Communication Skills	AEC 1	15	--	--	15	30	1	10	15	--	--	--	25
AEBTSH1PI108ME	Communication Skills	AEC 1	--	--	30	--	30	1	--	--	--	25	--	25
CCBTSH2PT10XME (0X=26,69, 70)	Liberal Learning Course -I	CC 1	--	--	60	--	60	2	--	--	--	25	25	50
ESBTME2TT101	Engineering Graphics	ESC 2	30	--	--	30	60	2	10	15	50	--	--	75
ESBTME2PI101	Engineering Graphics	ESC 2	--	--	60	--	60	2	--	--	--	25	--	25
VSBTME1TI10X	Elective -I : Vocational and Skill Enhancement	VSEC 1	15	--	--	15	30	1	10	15	--	--	--	25
VSBTME1PI10X (0X=02,03,04)	Elective -I : Vocational and Skill Enhancement	VSEC 1	--	--	30	--	30	1	--	--	--	25	--	25
ESBTCV3TT101ME	Engineering Mechanics	ESC 1	45	--	--	45	90	3	10	15	50	--	--	75
ESBTCV1PI101ME	Engineering Mechanics	ESC 1	--	--	30	--	30	1	--	--	--	25	--	25
TOTAL			150	15	240	165	570	19	60	90	200	150	25	525

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									Theory			Practical		Total Marks
			L	T	P				TAE	CAE	ESE	INT	EXT	
SEMESTER-II (NCrf Level 4.5)														
BSBTSH2TT201ME	Engineering Physics	BSC 2	15	15	--	30	60	2	10	15	50	--	--	75
BSBTSH1PI201ME	Engineering Physics	BSC 2	--	--	30	--	30	1	--	--	--	25	--	25
BSBTSH3TT206ME	Differential Equations and Statistics	BSC 3	30	15	--	45	90	3	10	15	50	--	--	75
IKBTSH2TT20XME (0X=09,10,11,17,18,19,20)	Elective: Indian Knowledge System	IKS	30	--	--	30	60	2	10	15	50	--	--	75
CCBTSH2PT20XME (0X=71,72, 73)	Liberal Learning Course 2	CC2	--	--	60	--	60	2	--	--	--	25	25	50
BSBTSH2TT214ME	Manufacturing Science	BSC 4	30	--	--	30	60	2	10	15	50	--	--	75
BSBTSH1PI214ME	Manufacturing Science	BSC 4	--	--	30	--	30	1	--	--	--	25	--	25
ESBTME2TT205	Material Science and Workshop Practice	ESC 3	30	--	--	30	60	2	10	15	50	--	--	75
ESBTME2PI205	Material Science and Workshop Practice	ESC 3	--	---	60	--	60	2	--	--	--	25	--	25
BTME1TT206	Sensors, Actuators & Measurement	PCC 1	15	---	---	15	30	1	10	15	50	---	---	75
BTME1PI206	Sensors, Actuators & Measurement	PCC 1	---	----	30	---	30	1	---	---	---	25	--	25
VSBTME1TI20X	Elective -II : Vocational and Skill Enhancement	VSEC 2	15	---	---	15	30	1	10	15	---	---	--	25
VSBTME1PI20X (0X=07,08,09)	Elective -II : Vocational and Skill Enhancement	VSEC 2	---	---	30	---	30	1	---	--	---	25	---	25
TOTAL			165	30	240	195	630	21	70	105	300	150	25	650

ELECTIVES

Applied Science and Humanities Board

23BTSHL10XAI -Elective : Indian Knowledge System -

Course	Course Code (L)	Course Code(P)
Elective: IKS- Concepts and Applications inEngineering	**IKBTSH2TT109AI/CY/IT/CV/ET** **IKBTSH2TT209CE/DS/ME/EL**	Not Applicable
Elective: IKS- Social History of Medicine In Colonial India	**IKBTSH2TT110AI/CY/IT/CV/ET** **IKBTSH2TT210 CE/DS/ME/EL**	Not Applicable
Elective: IKS- Modern IndianArchitecture	**IKBTSH2TT111AI/CY/IT/CV/ET** **IKBTSH2TT211 CE/DS/ME/EL**	Not Applicable
Elective: IKS- Introduction to Ancient Indian Technology	**IKBTSH2TT117AI/CY/IT/CV/ET** **IKBTSH2TT217 CE/DS/ME/EL**	Not Applicable
Elective: IKS- Introduction To Modern Indian Drama	**IKBTSH2TT118AI/CY/IT/CV/ET** **IKBTSH2TT218 CE/DS/ME/EL**	Not Applicable
Elective: IKS- Introduction To Indian Art - An Appreciation	**IKBTSH2TT119AI/CY/IT/CV/ET** **IKBTSH2TT219 CE/DS/ME/EL**	Not Applicable
Elective: IKS- Folk And Minor Art In India	**IKBTSH2TT120 AI/CY/IT/CV/ET** **IKBTSH2TT220 CE/DS/ME/EL**	Not Applicable

Liberal learning courses BTSH2PE10X or BTSH2PE20X

Course	Course Code (L)	Course Code(P)
Liberal learning course-1 Integrated Personality Development Course 1	Not Applicable	**CCBTSH2PT112** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-1 Government Missions (Study of any 2)	Not Applicable	**CCBTSH2PT126** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-1 Study of India's Top 2 Problems	Not Applicable	**CCBTSH2PT169** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-1 Study of one of the identified books	Not Applicable	**CCBTSH2PT170** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Integrated Personality Development Course 2	Not Applicable	**CCBTSH2PT213** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Innovation and Creativity	Not Applicable	**CCBTSH2PT271** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Sports-Representation of Institute at University level/Inter College Level and above in any sport	Not Applicable	**CCBTSH2PT272** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Making short film/Photography	Not Applicable	**CCBTSH2PT273** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Foreign Language (German)	Not Applicable	**CCBTSH2PT276** **AI/CE/DS/CY/IT/CV/ME/EL/ET**
Liberal learning course-2 Foreign Language (Japanese)	Not Applicable	**CCBTSH2PT277** **AI/CE/DS/CY/IT/CV/ME/EL/ET**

Mechanical Board

Course	Course Code (L)	Course Code(P)
Elective -I : Vocational and Skill Enhancement-2 Wheelers Maintenance	VSBTME1TI102	VSBTME1PI102
Elective -I : Vocational and Skill Enhancement-Digital Fabrication	VSBTME1TI103	VSBTME1PI103
Elective -I : Vocational and Skill Enhancement- Solar PV System	VSBTME1TI104	VSBTME1PI104
Elective -II : Vocational and Skill Enhancement-Design Thinking	VSBTME1TI207	VSBTME1PI207
Elective -II : Vocational and Skill Enhancement-3D Printing	VSBTME1TI208	VSBTME1PI208
Elective -II : Vocational and Skill Enhancement-Maintenance of Refrigeration and Air Conditioning Systems	VSBTME1TI209	VSBTME1PI209