



KAZI NAZRUL UNIVERSITY
SCHOOL OF MINES & METALLURGY

B.TECH IN MINING ENGINEERING																
With Effect from 2023-2024																
Course of Study	Discipline Code	Discipline		Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	Internal Marks		End Sem Marks		Total Marks	Sem Marks
											Practical	Theoretical	Practical	Theoretical		
BTC	BTCMN	B.Tech in Mining Engineering	1st Semester	Physics	BSC	BTCMNBSC101	BSC-1	3-1-3	5.5	17.5	20	30	30	70	150	500
				Mathematics - I	BSC	BTCMNBSC102	BSC-2	3-1-0	4			30		70	100	
				Basic Electrical Engineering	ESC	BTCMNBSC101	ESC-1	3-1-2	5		20	30	30	70	150	
				Engineering Graphics & Design	ESC	BTCMNBSC102	ESC-2	0-1-4	3		50		50		100	
			2nd Semester	Chemistry	BSC	BTCMNBSC201	BSC-3	3-1-3	5.5	20.5	20	30	30	70	150	650
				Mathematics - II	BSC	BTCMNBSC202	BSC-4	3-1-0	4			30		70	100	
				Communicative English	HSMC	BTCMNBHSMC201	HSMC-1	2-0-2	3		20	30	30	70	150	
				Introduction to C Programming	ESC	BTCMNBSC201	ESC-3	3-0-4	5		20	30	30	70	150	
				Workshop Practices	ESC	BTCMNBSC202	ESC-4	1-0-4	3		50		50		100	
			3rd Semester	Mathematics - III	BSC	BTCMNBSC301	BSC-5	3-1-0	4	27		30		70	100	900
				Biology	BSC	BTCMNBSC302	BSC-6	2-1-0	3			30		70	100	
				Engineering Mechanics	ESC	BTCMNBSC301	ESC-5	3-1-0	4			30		70	100	
				Strength of Materials	ESC	BTCMNBSC302	ESC-6	3-0-0	3			30		70	100	
				Economics for Engineers	HSMC	BTCMNBHSMC301	HSMC-2	3-0-0	3			30		70	100	
				Mine Development	PCC	BTCMNPCC301	PCC-1	3-0-0	3			30		70	100	
				Introduction to Mining	PCC	BTCMNPCC302	PCC-2	3-0-0	3			30		70	100	
				Mining Geology - I	PCC	BTCMNPCC303	PCC-3	3-0-2	4		20	30	30	70	150	
				Environmental Science	MC	BTCMNMCC301	MC-1	0-0-0	0			15		35	50	
			4th Semester	Underground Coal Mining	PCC	BTCMNPCC401	PCC-4	3-0-0	3	27		30		70	100	900
				Underground Metal Mining	PCC	BTCMNPCC402	PCC-5	3-0-0	3			30		70	100	
				Mine Ventilation	PCC	BTCMNPCC403	PCC-6	4-0-2	5		20	30	30	70	150	
				Mine Survey - I	PCC	BTCMNPCC404	PCC-7	4-0-2	5		20	30	30	70	150	
				Mining Geology - II	PCC	BTCMNPCC405	PCC-8	3-0-2	4		20	30	30	70	150	
				Mineral Processing	OEC (ANY ONE)	BTCMNOEC401	OEC-1	3-0-0	3			30		70	100	
				Chemical Processing	OEC (ANY ONE)	BTCMNOEC402	OEC-2	3-0-0	3			30		70	100	
				Universal Human Values-II: Understanding Harmony	HSMC	BTCMNBHSMC401	HSMC-3	3-0-0	3			30		70	100	
			Vocational Training-I	PROJ	BTCMNPROJ401	PROJ-1	0-0-2	1	20		30		50			
			5th Semester	Surface Mining	PCC	BTCMNPCC501	PCC-9	4-0-0	4	21		30		70	100	650
				Mining Machinery - I	PCC	BTCMNPCC502	PCC-10	3-0-2	4		20	30	30	70	150	
				Mine Survey - II	PCC	BTCMNPCC503	PCC-11	4-0-2	5		20	30	30	70	150	
				Rock Mechanics	PCC	BTCMNPCC504	PCC-12	4-0-2	5		20	30	30	70	150	
				Drilling and Blasting	PEC (ANY ONE)	BTCMNPCC501	PEC-1	3-0-0	3			30		70	100	
			6th Semester	Mineral Economics	PCC	BTCMNPCC502	PCC-13	3-0-2	4	18	20	30	30	70	150	700
				Mining Machinery - II	PEC (ANY ONE)	BTCMNPCC601	PEC-2	3-0-2	4		20	30	30	70	150	
				Mine Planning and Design	PEC (ANY ONE)	BTCMNPCC602	PEC-3	3-0-0	3			30		70	100	
				Coal Preparation and Categorisation	PEC (ANY ONE)	BTCMNPCC603	PEC-4	3-0-0	3			30		70	100	
				Ground Control	PEC (ANY ONE)	BTCMNPCC604	PEC-5	3-0-0	3			30		70	100	
				Numerical Methods in Mining Engineering	OEC (ANY ONE)	BTCMNOEC601	OEC-2	3-0-0	3			30		70	100	
				Sensor and Transducer	OEC (ANY ONE)	BTCMNOEC602	OEC-3	3-0-0	3			30		70	100	
				Instrumentation Engineering	OEC (ANY ONE)	BTCMNOEC603	OEC-4	3-0-0	3			30		70	100	
				Industrial Management and Environmental Control	OEC (ANY ONE)	BTCMNOEC604	OEC-5	3-0-0	3			30		70	100	
				Production & Operation Management	MC	BTCMNMCC601	MC-2	0-0-0	0			15		35	50	
			Indian Constitution	PROJ	BTCMNPROJ601	PROJ-2	0-0-2	1	20		30		50			
			7th Semester	Mine Management, Safety and Legislation - I	PCC	BTCMNPCC701	PCC-14	4-0-0	4	19		30		70	100	650
				Mine Environment	PEC (ANY ONE)	BTCMNPCC701	PEC-4	3-0-0	3			30		70	100	
				Ergonomics and Safety Engineering	PEC (ANY ONE)	BTCMNPCC702	PEC-5	3-0-0	3			30		70	100	
				Environmental Aspects of Mining	PEC (ANY ONE)	BTCMNPCC703	PEC-6	3-0-0	3			30		70	100	
				Mine System Engineering	PEC (ANY ONE)	BTCMNPCC704	PEC-7	3-0-0	3			30		70	100	
				Quality Assurance & Quality Control	OEC (ANY ONE)	BTCMNOEC701	OEC-4	3-0-0	3			30		70	100	
				Optimization Technique	OEC (ANY ONE)	BTCMNOEC702	OEC-5	3-0-0	3			30		70	100	
				Remote Sensing & GIS	OEC (ANY ONE)	BTCMNOEC703	OEC-6	3-0-0	3			30		70	100	
				Business Analytics	OEC (ANY ONE)	BTCMNOEC704	OEC-7	3-0-0	3			30		70	100	
				Soft Skill Development	LC	BTCMNLCC701	LC-1	0-0-2	1		20		30		50	
				Project-I	PROJ	BTCMNPROJ701	PROJ-3	0-0-4	2		40		60		100	
			8th Semester	Mine Management, Safety and Legislation - II	PCC	BTCMNPCC801	PCC-15	4-0-0	4	12		30		70	100	400
				Project-II	PROJ	BTCMNPROJ801	PROJ-4	0-0-12	6		80		120		200	
				Viva-Voce	LC	BTCMNLCC801	LC-2	0-0-0	2		40		60		100	
				TOTAL CREDITS AND MARKS						162						5350

Abbreviations: BSC = Basic Science Course; ESC = Engineering Science Course; PCC = Professional Core Course; PEC = Professional Elective Course; OEC = Open Elective Course; MC = Mandatory Course; PROJ = Project (PROJ); HSMC = Humanities, Social Science including Management courses; LC = Laboratory course; L= Lecture Hour; T= Tutorial Hour; P= Practical Hour

NOTE 1: Induction program (Mandatory non-credit course) of 3 weeks duration for students to be offered right at the start of the first year. Induction Program will have the following:

- ☐ Physical activity
- ☐ Creative Arts
- ☐ Universal Human Values-I
- ☐ Literary activity
- ☐ Proficiency Modules
- ☐ Lectures by Eminent People
- ☐ Visits to local Areas
- ☐ Familiarization to Dept./Branch & Innovations

Subject Type (No.xCredit)	Mining, KNU	AICTE
HSMC=3×3	9	12
BSC=(2×5.5)+(3×4)+(1×3)	26	25
ESC=(2×5)+(1×4)+(3×3)	23	24
PCC=(4×5)+(7×4)+(4×3)	60	48
PEC=(4×3)+(1×4)	16	18
OEC=5×3	15	18
PROJ/LC=(1×3)+(2×2)+(1×6)	13	15
TOTAL	162	160