

KAZI NAZRUL UNIVERSITY				FACULTY OF SCIENCE, TECHNOLOGY AND VOCATIONAL STUDIES			DEGREE PROGRAMME: M.SC IN PHYSICS			WITH EFFECT FROM THE ACADEMIC SESSION: 2023-24										
Abbreviated Degree	Discipline	Abbreviated Degree Programme	Semester	Course Name		Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks			
M.SC	PHYSICS	MSCPHYS	I	Classical Mechanics and Special Theory of Relativity		C	MSCPHYSC101	CC-1	4 - 0 - 0	4	20		15		35	50	250			
				Quantum Mechanics - I		C	MSCPHYSC102	CC-2	4 - 0 - 0	4			15		35	50				
				Mathematical Methods of Physics		C	MSCPHYSC103	CC-3	4 - 0 - 0	4			15		35	50				
				Computer Programming and Computational Physics		C	MSCPHYSC104	CC-4	4 - 0 - 0	4			15		35	50				
				Physics Lab - I and Seminar		C	MSCPHYSC105	CC-5	0 - 0 - 8	4		30		20		50				
			II	Thermal and Statistical Physics		C	MSCPHYSC201	CC-6	4 - 0 - 0	4	24		15		35	50	300			
				Electrodynamics and Plasma Physics		C	MSCPHYSC202	CC-7	4 - 0 - 0	4			15		35	50				
				Condensed Matter Physics		C	MSCPHYSC203	CC-8	4 - 0 - 0	4			15		35	50				
				Nuclear and Introduction to Particle Physics		C	MSCPHYSC204	CC-9	4 - 0 - 0	4			15		35	50				
				Physics Lab - II and Seminar		C	MSCPHYSC205	CC-10	0 - 0 - 8	4		30		20		50				
				Choose from Pool of Minor Electives		MIE	See Pool	MIEC-1	See Pool	4		See Pool				50				
			III	Quantum Mechanics - II		C	MSCPHYSC301	CC-11	4 - 0 - 0	4	20		15		35	50	250			
				Atomic and Molecular Spectroscopy		C	MSCPHYSC302	CC-12	4 - 0 - 0	4			15		35	50				
				Advanced Optics		C	MSCPHYSC303	CC-13	4 - 0 - 0	4			15		35	50				
				Physics Lab - III and Seminar		C	MSCPHYSC304	CC-14	0 - 0 - 8	4		30		20		50				
				Choose from Pool of Minor Electives		MIE	See Pool	MIEC-2	See Pool	4		See Pool				50				
			IV	Optoelectronics and Laser Physics		(Any Three)	MJE	MSCPHYSMJE401	MJEC-1, MJEC-2 & MJEC-3	4 - 0 - 4	6X3=18	24	30	15	20	35	100X3=300	350		
				Magnetic Materials and Spintronics				MSCPHYSMJE402		4 - 0 - 4			30	15	20	35				
				Communication Electronics				MSCPHYSMJE403		4 - 0 - 4			30	15	20	35				
				Nonlinear Optics and Optical Switching				MSCPHYSMJE404		4 - 0 - 4			30	15	20	35				
				Advanced Condensed Matter Physics				MSCPHYSMJE405		4 - 0 - 4			30	15	20	35				
				Microwave and Quantum Devices				MSCPHYSMJE406		4 - 0 - 4			30	15	20	35				
				Quantum Computing and Cryptography				MSCPHYSMJE407		4 - 0 - 4										
				Particle Physics and Introduction to Quantum Field Theory				MSCPHYSMJE408		4 - 0 - 4			30	15	20	35				
				Project - Term Paper & Grand Viva				C		MSCPHYSC401			CC-15	0 - 0 - 12	6	30				20
				Total Credit and Marks											88	1150				
			Abbreviations: C= Core; CC=Core Course; MJE= Major Elective; MJEC= Major Elective Course; MIE= Minor Elective; MIEC= Minor Elective Course; CA Marks= Continuous Assessment Marks; ESE Marks= End Semester Examination Marks; L= Lecture Hour; T= Tutorial Hour; P= Practical Hour/ Field Work and NA= Not Applicable																	
			Pool of Minor Elective [Offered by the Department of Physics for all other Departments across faculties]. Student has to choose at least one Minor Elective from other departments except his/her own department.																	
			Discipline			Semester	Course Name		Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
			PHYSICS			II	History and Philosophy of Science		MIE	MSCPHYSMIE201	MIEC-1	4 - 0 - 0	4	NA		15		35	50	NA
						III	Electronics : Analog and Digital		MIE	MSCPHYSMIE301	MIEC-2	4 - 0 - 0	4	NA		15		35	50	NA