

KAZI NAZRUL UNIVERSITY			FACULTY OF SCIENCE, TECHNOLOGY AND VOCATIONAL STUDIES		DEGREE PROGRAMME: M.SC IN PHYSICS			WITH EFFECT FROM THE ACADEMIC SESSION: 2022-23										
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		
											Practical	Theoretical	Practical	Theoretical				
M.SC	PHYSICS	MSCPHYS	I	Classical Mechanics and Special Theory of Relativity	C	MSCPHYSC101	CC-1	4 - 0 - 0	4	20	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	24	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	20	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	6X3=18	24	24	4 - 0 - 4	30	15	20	35	100X3=300	350
				Magnetic Materials and Spintronics			4 - 0 - 4					30	15	20	35			
				Communication Electronics			4 - 0 - 4					30	15	20	35			
				Nonlinear Optics and Optical Switching			4 - 0 - 4					30	15	20	35			
Advanced Condensed Matter Physics	4 - 0 - 4	30		15			20					35						
Microwave and Quantum Devices	4 - 0 - 4	30		15			20					35						
Quantum Computing and Cryptography	4 - 0 - 4	30		15			20					35						
Project - Term Paper & Grand Viva	C	MSCPHYSC401		CC-15	0 - 0 - 12	6	30		20		50							
<b>Total Credit and Marks</b>								<b>88</b>					<b>1150</b>					
<b>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</b>																		
<b>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.</b>																		
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				
									Practical	Theoretical	Practical	Theoretical						
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				