

 KAZI NAZRUL UNIVERSITY				FACULTY OF SCIENCE, TECHNOLOGY & VOCATIONAL STUDIES		2-Year PG Degree			WITH EFFECT FROM THE ACADEMIC SESSION: 2026-27									
Abbreviated Degree	Discipline	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				
MSC	Physics	2-year PG Degree	I	Computational Physics	MAJOR COURSEWORK	MSCPHSMC701	MC-1	3 - 0 - 4	5	25	30	15	20	35	100	500		
				Advanced Condensed Matter Physics	MAJOR COURSEWORK	MSCPHSMC702	MC-2	3 - 0 - 4	5		30	15	20	35	100			
				Advanced Quantum Mechanics -I	MAJOR COURSEWORK	MSCPHSMC703	MC-3	4 - 1 - 0	5			30		70	100			
				Mathematical Physics	MAJOR COURSEWORK	MSCPHSMC704	MC-4	4 - 1 - 0	5			30		70	100			
				Choose from the Pool of Minor Courses offered in 1 st Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-1	4 - 1 - 0	5			30		70	100			
			II															
				Advanced Nuclear and Particle Physics	MAJOR COURSEWORK	MSCPHSMC801	MC-5	4 - 1 - 0	5	25		30		70	100	500		
				Electrodynamics	MAJOR COURSEWORK	MSCPHSMC802	MC-6	4 - 1 - 0	5			30		70	100			
				Advanced Statistical Mechanics	MAJOR COURSEWORK	MSCPHSMC803	MC-7	4 - 1 - 0	5			30		70	100			
				Laboratory and Seminar	MAJOR COURSEWORK	MSCPHSMC804	MC-8	0 - 2 - 8	5		60		40		100			
			Choose from the Pool of Minor Courses offered in 2 nd Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-2	4 - 1 - 0	5			30		70	100				
			Student exiting the programmes after securing 50 credits will be awarded PG Diploma in the relevant Discipline/Subject provided they secure following 2 credits in work based vocational courses during 1 st year from the scheduled SWAYAM, NPTEL and ANY OTHER SIMILAR Courses.(Any one may persue a course having more than 2 credits but 2 credit weightage will be considered .															
			II	Vocational Course	VC	VC801	VC-1	0 - 0 - 4	2		30		20	50				
				Advanced Quantum Mechanics -II	Group A	e opted)	MSCPHSMCE901	MCE-1	4 - 1 - 0	5			30		70	100		
				Advanced Atomic and Molecular Physics			MSCPHSMCE902	MCE-2	4 - 1 - 0	5			30		70	100		
Optoelectronics and Laser Science	MSCPHSMCE903	MCE-3		3 - 0 - 4			5	30	15	20		35	100					
Advanced Quantum Mechanics -II		MSCPHSMCE901		MCE-1	4 - 1 - 0		5		30			70	100					

			III	Advanced Atomic and Molecular Physics	Group B	Major Research Coursework Elective (Any one group to be chosen)	MSCPHSMCE902	MCE-2	4 - 1 - 0	5	20		30		70	100	400	
				Spintronics			MSCPHSMCE904	MCE-3	3 - 0 - 4	5		30	15	20	35	100		
				Advanced Quantum Mechanics -II	Group C		MSCPHSMCE901	MCE-1	4 - 1 - 0	5			30		70	100		
				Advanced Atomic and Molecular Physics			MSCPHSMCE902	MCE-2	4 - 1 - 0	5			30		70	100		
				Quantum Field Theory			MSCPHSMCE905	MCE-3	4 - 1 - 0	5			30		70	100		
				Advanced Quantum Mechanics -II	Group D		MSCPHSMCE901	MCE-1	4 - 1 - 0	5			30		70	100		
				Advanced Atomic and Molecular Physics			MSCPHSMCE902	MCE-2	4 - 1 - 0	5			30		70	100		
				Microwave and Quantum Devices			MSCPHSMCE906	MCE-3	3 - 0 - 4	5		30	15	20	35	100		
				Advanced Quantum Mechanics -II	Group E		MSCPHSMCE901	MCE-1	4 - 1 - 0	5			30		70	100		
				Advanced Atomic and Molecular Physics			MSCPHSMCE902	MCE-2	4 - 1 - 0	5			30		70	100		
				Communication Electronics			MSCPHSMCE907	MCE-3	3 - 0 - 4	5		30	15	20	35	100		
				Research Methodology with AI			Research Methodology	MSCPHSRMAI901	RMC-1	3 - 0 - 4		5	30	15	20	35		100
			IV	Literature Review		Dissertation	MSCPHSRD1001	RDC-1	0 - 3 - 4	5	20	60		40		100	400	
				PG Dissertation		Dissertation	MSCPHSRD1002	RDC-2	0 - 10 - 10	15		180		120		300		
				Total Credit and Marks		TOTAL CREDIT					90	TOTAL MARKS					1800	
Stuendts have to opt any of the groups of Major Research Coursework in Semester III.Students who want to undertake 2-year PG will be awarded PG Degree in the relevant Discipline / Subject provided they secure 90 credits																		
Abbreviations: MC-= Major Coursework;MN=Minor;MNC= Minor Course; VC=Vocational Course, MCE= Major Research Coursework Elective, RMAI= Research Methodology including Artificial Itelligence, RMC= Research Methodology including AI Course;RD=Research Dissertation; RDC=Research Dissertation Course; CA= Continuous Assessment, ESE= End Semester Examination, L= Lecture Hour; T= Tutorial Hour and P= Practical Hour/ Field Work and NA= Not Applicable																		
Note: Minor Courses (MNC) : Students of a particular PG Course will choose from the Pool of Minor Courses offered by disciplines other than the major discipline opted by the student Across the faculty																		
Semesterwise Pool of Minor Courses offered by Physics for other Disciplines within the Faculty																		
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	I	History & Philosophy of Science	MINOR	MSCPHYMN701	MNC-1	4 - 1 - 0	5	NA		30		70	100	NA				
	II	Energy and Environmental Science		MSCPHYMN801	MNC-2	4 - 1 - 0	5			30		70	100					

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