

**CBCS Syllabus – M.Sc., PHYSICS**  
(Applicable for students admitted in June 2021 and onwards)

SEM	Category	Title of the Courses	S. Code	H/W	L	T	P	C	Marks		
									I	E	T
I	DSC-I	Mathematical Physics-I	21PCPH11	5	5	-	-	4	40	60	100
	DSC-II	Classical Mechanics	21PCPH12	5	5	-	-	4	40	60	100
	DSC-III	Thermodynamics and statistical mechanics	21PCPH13	5	5	-	-	4	40	60	100
	DSE-I	(A) Advanced Electronics	21PEPH11A	4	4	-	-	4	40	60	100
		(B) Python Programming	21PEPH11B								
		(C) Radiological Safety Aspects	21PEPH11C								
	P-I	General Physics Practicals-I	21PCPH1P1	4	-	-	4	2	40	60	100/2
	P-II	Advanced Electronics Practicals-I	21PCPH1P2	4	-	-	4	2	40	60	100/2
IDC	Basics of Digital Electronics	21PIPH11	2	2	-	-	2			100	
	Library Hour		1	-	-	-					
II	DSC-IV	Mathematical Physics-II	21PCPH21	5	5	-	-	4	40	60	100
	DSC-V	Quantum Mechanics -I	21PCPH22	5	5	-	-	4	40	60	100
	DSC-VI	Atomic and Molecular Spectroscopy	21PCPH23	5	5	-	-	4	40	60	100
	DSE-II	(A) Advanced Microprocessors and Microcontroller	21PEPH21A	4	4	-	-	4	40	60	100
		(B) Material Physics and Processing Techniques	21PEPH21B								
		(C) Plasma Physics	21PEPH21C								
	P-III	General Physics Practicals-II	21PCPH2P1	4			4	2	40	60	100/2
	P-IV	Advanced Electronics practicals-II	21PCPH2P2	4	-	-	4	2	40	60	100/2
SEC	(SEC-I) NPTEL ONLINE COURSE	21PSPH21	2	-	2	-	2	40	60	100	
	Library Hour		1	-	-	-	-				
III	DSC-VII	Electromagnetic Theory	21PCPH31	5	5	-	-	4	40	60	100
	DSC-VIII	Quantum mechanics -II	21PCPH32	5	5	-	-	4	40	60	100

	DSC-IX	Research Methodology	21PCPH33	5	5	-	-	4	40	60	100	
	DSE-III	(A) Non-Linear Physics	21PEPH31A									
		(B) Physics of Nano Materials	21PEPH31B	4	4	-	-	4	40	60	100	
		(C) Density Functional Theory	21PEPH31C									
	P-V	Advanced Physics Practicals-I	21PCPH3P1	4	-	-	4	2	40	60	100/2	
	P-VI	Microprocessor and Microcontroller-Practicals	21PCPH3P2	4	-	-	4	2	40	60	100/2	
	IDC-II	Energy Physics	21PIPH31	2	2	-	-	2	40	60	100	
		Library Hour		1	-	-	-	-				
IV	DSC-X	Advanced Solid State Physics	21PCPH41	5	5	-	-	4	40	60	100	
	DSC-XI	Nuclear and Elementary Particle Physics	21PCPH42	5	5	-	-	4	40	60	100	
	P	Project	21PPPH41	8	-	8	-	8	40	60	200	
	DSE-IV	(A) Applied Optics and Laser Physics	21PEPH41A									
		(B) Elementary Numerical Analysis	21PEPH41B	4	4	-	-	4	40	60	100	
		(C) Quantum field Theory	21PEPH41C									
	P-VII	Advanced Physics Practicals-II	21PCPH4P1	4	-	-	4	2	40	60	100/2	
P-VIII	Numerical methods and C++ Programming in Physics	21PCPH4P2	4	-	-	4	2	40	60	100/2		
			<b>Total</b>	<b>120</b>			<b>90</b>				<b>2400</b>	