

5 yr. Integrated MSc Physics 2020

SEMESTER 1				SEMESTER 2			
Code No	Course Title	L T P	Cr	Code No	Course Title	L T P	Cr
18ENG101	Communicative English	2 0 2	3	18ENG121	Professional Communication	1 0 2	2
	Language I	1 0 2	2		Language II	1 0 2	2
18CHY103	Chemistry I	3 0 0	3	18CHY114	Chemistry II	3 0 0	3
18CSA100	Problem Solving and Computer Programming	3 0 0	3	18PHY113	Advanced Computer Programming Introduction to Python	3 0 0	3
18MAT106	Trigonometry and Differential Equations	3 1 0	4	18MAT119	Matrices and Vector Calculus	3 1 0	4
18PHY104	Mechanics and Properties of Matter	3 1 0	4	18PHY111	Basics of Electricity and Magnetism	3 1 0	4
18CHY182	Chemistry Lab I	0 0 2	1	18CHY183	Chemistry Lab II - Instrumental	0 0 2	1
18CSA180	Problem Solving and Computer Programming Lab	0 0 2	1	18PHY185	Advanced Computer Programming / Python Lab	0 0 2	1
18CUL101	Cultural Education I	2 0 0	2	18PHY183	Physics Lab I - Mechanics and Properties of Matter	0 0 2	1
TOTAL			23	18CUL111	Cultural Education II	2 0 0	2
TOTAL			23	TOTAL			23
SEMESTER 3				SEMESTER 4			
18PHY201	Basic Experimental Techniques in Physics	3 1 0	4	18ENV300	Environmental Science and Sustainability	3 0 0	3
18PHY203	Optics and Wave Motion	3 1 0	4	18PHY216	Digital Electronics	3 1 0	4
	Elective A	3 0 0	3		Elective B	3 0 0	3
18PHY204	Analog Electronics	3 1 0	4	18PHY217	Introduction to computational Physics	3 1 0	4
18PHY205	Introduction to Mathematical Physics	3 1 0	4	18PHY284	Physics Lab III - Optics	0 0 2	1
18PHY283	Physics Lab II - Heat, Electricity and Magnetism	0 0 2	1	18PHY218	Modern Physics	3 1 0	4
18SSK201	Life Skills I	1 0 2	2	18SSK211	Life Skills II	1 0 2	2
18AVP201	Amrita Value Programme I	1 0 0	1	18AVP211	Amrita Value Programme II	1 0 0	1
TOTAL			23	TOTAL			22
SEMESTER 5				SEMESTER 6			
18PHY306	Thermal Physics	3 1 0	4	18PHY318	Atomic and Molecular Physics	3 1 0	4
18PHY307	Electrodynamics	3 1 0	4	18PHY319	Intermediate Mechanics	3 1 0	4
18PHY308	Solid State Physics	3 1 0	4	18PHY320	Introduction to Modern Optics(course name to be reassigned)	3 1 0	4
18PHY390	Free/Open Elective* /Living Lab®	3 0 0	3		Elective D	3 0 0	3
	Elective C	3 0 0	3	18PHY385	Physics Lab V – Electronics	0 0 2	1
18PHY384	Physics Lab IV – Modern Physics	0 0 2	1	TOTAL			16
18SSK301	Life Skills III	1 0 2	2	18PHY399	Project (for Exit-option students)	6	
TOTAL			21	TOTAL (for Exit-option students)			22
TOTAL			21	TOTAL			128
TOTAL			21	For Exit option			134
SEMESTER 7				SEMESTER 8			
18PHY501	Classical Mechanics	3 1 0	4	18PHY511	Quantum Mechanics II	3 1 0	4
18PHY502	Quantum Mechanics I	3 1 0	4	18PHY512	Mathematical Physics II	3 1 0	4
18PHY503	Mathematical Physics I	3 1 0	4	18PHY513	Statistical Mechanics	3 1 0	4
18PHY504	Computational Physics	3 1 0	4	18PHY514	Advanced Electrodynamics	3 1 0	4
18PHY581	Advanced Physics Lab	0 0 3	2	18PHY515	Experimental Techniques	3 1 0	4
18PHY582	Simulation Lab	0 0 3	1	18PHY583	Advanced Electronics Lab	0 0 3	2
18PHY591	Mini Project		1	TOTAL			22
TOTAL			20	TOTAL			22
SEMESTER 9				SEMESTER 10			
18PHY601	Atomic, Molecular and Optical Physics	3 1 0	4	18PHY696	Dissertation		18
18PHY602	Condensed Matter Physics	3 1 0	4	18PHY697	Viva voce		2
18PHY603	Nuclear and Particle Physics	3 1 0	4	TOTAL			20
	Elective I	3 0 0	3				
	Elective II	3 0 0	3				
18PHY681	Spectroscopy Lab	0 0 3	2				
TOTAL			20	TOTAL for 5 YR Int. MSc			210

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