Department of Physics

BSc(General) Major Physics													
Level	**Sem**	**Disciplinary Major Mandatory**	**DSE Electives**	**Minor**				**OE**	**VC/SEC**	**AEC, VEC, IKS**	**OJT, FP, CEP, CC, RP**	**Total**	**Exit Credit**	**Final Total Credits**
				Electronics	**Statistics**	**Mathematics**	**Chemistry**							
4.5	**I**	2Cr-T:Mechanics 2Cr-T:Physics Principles and applications 2Cr-P:Physics Practical based on Section 1 and Section2						**Physics in Everyday Life (Practical) 2 Cr (Arts) Physics in Sports (Practical) 2 Cr (Commerce)**	2Cr-P:Basic Electrical Wiring (Practical) (VSC) 2Cr-P:Build your own Telescope/ Binocular (SEC)	2Cr-T:English (AEC) 2Cr-T:Environment Science(VEC) 2Cr-T:Philosophy of Physics/ History of Physics-Ancient to Modern era (IKS)	2Cr: Yoga (CC)	**22**		**22**
4.5	**II**	2Cr-T:Thermodynamics 2Cr-T:Electricity and Magnetism 2Cr-P:Physics Practical based on Section 1 and Section 2		2Cr-T:Basics of Electronic devices and Systems	2Cr-T:Basics of Statistics	**2Cr-T:Basic Course in Algebra**		2Cr-P:Physics in Everyday life 2Cr-P: Instrumentation for agriculture	2Cr-P:Exploring Physics using softwares(VSC) 2Cr-P:Python Programming(SEC)	2Cr-T:English (AEC) 2Cr-T:Environment Science(VEC)	2Cr:Performing Arts (CC)	**22**		**22**
Cumulative		**12**		**2**				**8**	**8**	**10**	**4**	**44**	**4**	**48**
Certificate on Exit + 4 credit Bridge Course														

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				Electronics	**Statistics**	**Mathematics**	**Chemistry**							
5	**III**	2Cr-T:Mathematical Methods in Physics 2Cr-T:Electronics/ Instrumentation 2Cr-P:Physics Practical based on Section 1 2Cr-P:Physics Practical based on Section 2		2Cr-T:Digital System Design 2Cr-P:Practicals based on Digital System Design	2Cr-T:Introduction to R software and learning of exploratory data Analysis 2Cr-P:Use of R software to explore the data	**2Cr-T:Basic Course in Calculus 2Cr-P:Practical Course based on Minor Paper - 2**	4Cr-T:Chemistry of life	2Cr-P:Physics in Sports/ Physics of Music	2Cr-P:Origin software	2Cr-T:English (AEC)	2Cr-P:Major Specific Project(FP) 2Cr-Music	**22**	**4**	**26**
5	**IV**	2Cr-T:Waves and Oscillations 2Cr-T:Optics 2Cr-P:Physics Practical based on Section 1 2Cr-P:Physics Practical based on Section 2		2Cr-T:Analog System Design 2Cr-P:Practicals based on Analog System Design	2Cr-T:Fittiting of mathematical models for predicative data Analysis 2Cr-P:Use of R software for fitting of model	**2Cr-T: Matrix Theory 2Cr-P:Practical Course based on Minor Paper - 4**	4Cr-T:Chemistry of Materials	2Cr-P:Weather Studies	2Cr-P:Python Programming for Scientific Data Analysis (VEC)	2Cr-T:English (AEC)	2Cr-P:Community Engagement Project (CEP) 2Cr: Drama 2	**22**		**22**
Cumulative		**28**		**10**				**12**	**12**	**14**	**12**	**88**		**96**
Diploma on Exit + 4 credits of NSQF and Internship														

Department of Physics

BSc(General) Major Physics														
Level	**Sem**	**Disciplinary Major Mandatory**	**DSE Electives**	**Minor**				**OE**	**VC/SEC**	**AEC, VEC, IKS**	**OJT, FP, CEP, CC, RP**	**Total**	**Exit Credit**	**Final Total Credits**
				Electronics	**Statistics**	**Mathematics**	**Chemistry**							
5.5	**V**	2Cr-T:Classical Mechanics 2Cr-T:Electrodynamics 2Cr-T:Atomic and Molecular Physics 2Cr-T:C Programming 2Cr-P:Physics Practical based on Major Paper-9 Section	2Cr-T:Biophysics/ Material Science 2Cr-P:Practical based on Major Elective-1	2Cr-T:Digital and wireless communication systems 2Cr-P:Practical based on Communication	2Cr-T:Statistical Quality control 2Cr-P:Practical based on Statistical Quality control	**2Cr-T:Differential and Integral Calculus 2Cr-P: Practical Course based on Minor Paper - 6**	2Cr-P:Laboratory Safety 2Cr-T:IPR and Chemoinformatics		2Cr-P:PV Solar Systems /Renewable and Non Renewable Energy Sources(VSC)		2Cr-Community Engagement Project	**22**		**22**
5.5	**VI**	2Cr-T:Solid State Physics 2Cr-T: Quantum Mechanics 2Cr-T:Nuclear Physics 2Cr-T:Electronics II 2Cr-P:Physics Practical based on Major Paper-12 Section 1 and 2 and Major Paper-13 Section 1 and 2	2Cr-T:Medical Electronics/ Biophysics 2Cr-P:Practical based on Major Elective-2	2Cr-T:Microcontroller and Embedded Systems 2Cr-P:Interfacing and Programming the microcontroller	2Cr-T:Introduction to Pythan for handling large data 2Cr-P:Introduction to Data Analytics	**2Cr-T:Applied Mathematics 2Cr-P:Practical Course based on Minor Paper - 8**	2Cr-T:Instrumental methods of analysis 2Cr-P: Analytical Chemistry Practical Course				4Cr:On Job Training	**22**		**22**
Cumulative		**48**	**8**	**18**				**12**	**14**	**14**	**18**	**132**		**140**
Award of Degree														

Department of Physics

BSc(General) Major Physics														
Level	**Sem**	**Disciplinary Major Mandatory**	**DSE Electives**	**Minor**				**OE**	**VC/SEC**	**AEC, VEC, IKS**	**OJT, FP, CEP, CC, RP**	**Total**	**Exit Credit**	**Final Total Credits**
				Electronics	**Statistics**	**Mathematics**	**Chemistry**							
6	**VII**	3 Cr (Th) Advance Mathematics for Physicist. 3 Cr (Th) Advance Electronics 3Cr (Th) Advance Quantum Mechanics 3 Cr (Th) Medical Physics 2 Cr (Pr) Physics Practical	2 Cr (Th) Material Science I 2 Cr (Pr) Practical based on Elective Subject	2Cr-T: Research Methodology 2Cr-P: Research Methodology										
6	**VIII**	3Cr (Th) Advance Classical Mechanics 3 Cr (Th) Modern Physics 3Cr (Th) Advance Electronics 3 Cr (Th) Advance Solid State Physics 2 Cr (Pr) Physics Practical	2 Cr (Th) Material Science II 2 Cr (Pr) Practical based on Elective Subject								**4 Cr OJT**			
Cumulative		**76**	**16**	**22**				**12**	**14**	**14**	**22**	**176**		184
			Four Year UG Honours Degree											