B.Sc – Physics

Programme Specific Outcomes

PSO 1: Understand and analyze the basic Concepts of Physics Subjects

PSO 2 : To find the Applications of the different Concepts and develop a Scientific temper

PSO 3: To gain practical experience by performing experiments, observation and interpreting the results.

PSO 4 : To Provide the Sufficient Knowledge and to Gain an Expertise in Contemporary areas of Physics, which encourages and motivates the student to take up a carrier in Physics and go for Post Graduation and further motivates to choose Research as Carrier.

PSO 4: To provide skills set required for employment and adoption to various technologies and work culture. .

COURSE OUTCOMES 2018-2019					
Department of Physics 2018-2019					
Sl No	**Year**	**Course Code**	**Course Name**	**CO No.**	**Course Outcome**
1	2018-2019	PHYS-111	Mechanics of particles, rigid bodies and continuous media	CO1	To Understand the Laws of Motion.
				CO2	To Understand the Basics of Vector Calculus
				CO3	Understand the Laws of Gravitation, GPS
				CO4	To Understand the Rigid Body Dynamics
				CO5	To Understand and determination Elasticity, Viscosity and Surface Tension Properties and their Applications
2	2018-2019	PHYS-112	Kinetic theory and thermodynamics	CO1	To Understand the Laws of Thermodynamics and their applications.

				CO2	To Understand the different Thermodynamic Potential and application of Specific heat of gases
				CO3	To Understand the Black Body Radiation and derivation of different Laws of Radiation
				CO4	Introduction to Statistical Mechanics
3	2018-2019	PHYS – 121	Oscillations waves and acoustics	CO1	To Understand the Superposition Principle of Harmonic Oscillations analytically and Garaphically and understand the Beat Phenomenon
				CO2	To Understand Wave Motion and Applications
				CO3	To Understand the Sound Phenomenon and dependence of its on Pressure and Temperature
				CO4	To Understand Acoustics and its applications
4	2018-2019	PHYS – 122	Optics	CO1	To Understand Fermat's Principals and Matrix Method of representation in Paraxial Optics
				CO2	To study Reflection and Refraction Phenomenon in Optics and different Aberrations present in lenses
				CO3	To study Interference and Diffraction of Light and their Applications
				CO4	To Understand Polarization of Light, its production and applications
5	2018-2019	PHYS – 231	Electricity and Magnetism	CO1	To Study Vector Analsis and introduction to Gauss-divergence and Stoke's Theorem
				CO2	To Understand Electric Force, Electric Field and Electric Potential in different configurations
				CO3	To Understand the basics laws of Magnetism and calculations of magnetic field of a Straight, Cirular Coil carry current .
				CO4	To Study Maxwell's Equation and Electromagnetic Wave Propagation.
6	2018-2019	PHYS – 232	Modern Physics and Relativity	CO1	To Understand the various problems where Classical Physics fails to explain which leads to Modern Physics
				CO2	To Understand Plank's Quantum Principle, Photon, Photo Electric effect and its applications
				CO3	To Understand Schrodinger equation and introduction to Quantum mechanical operators, Physics interpretation of wave equation , Probabilities

				CO4	To Understand Special Theory of Relativity and its Postulates. Length Contraction etc.
7	2018-2019	PHYS – 241	Quantum Mechanics	CO1	Understand the Time Dependent Schrodinger Equation and its Applications and evaluation of Quantum mechanical Operators
				CO2	Understand the Time Independent Schrodinger Equation and its Applications and evaluation of Quantum mechanical Operators
				CO3	Discussion of bound States in an arbitrary potentials
				CO4	Understand the Quantum Theory of Hydrogen and like atoms.
8	2018-2019	PHYS – 242	Electronics	CO1	Understanding of Network Theorems, LR,CR, LCR Circuits
				CO2	Study of different Diodes , biasing of Diodes and Applications
				CO3	Study of different Transistor, Biasing and Applications
				CO4	Study of different FET , JFET, MOSFET and applications
				CO5	Study of different Operational Amplifiers , its properties and its applications
8	2018-2019	PHYS – 352	Solid States Physics	CO1	Understanding of Crystallography, lattice parameters, X-Ray Diffraction of Crystals
				CO2	Study of types of bonding in solids, lattice vibrations-Optic and acoustic mode
				CO3	Study of different conduction mechanism in solids
				CO4	Study of different magnetic properties and applications in Solid State Physics
				CO5	Study of Superconductors , Meisesner Effect and Type-I and Type-II Super Conductors.
8	2018-2019	PHYS – 353	Atomic and Molecular Spectroscopy	CO1	Understanding of Atomic Specyra, Coupling of Orbiatls, X- Ray Spectra, Moseley's law
				CO2	Study of the Effect of Magnetic Field on energy levels: Zeeman effect

				CO3	Understanding of Rotational and Vibrational levels and their applicaitions
				CO4	Study of Raman Effect and its Applications
				CO5	Understanding of Laser Systems and their applications
8	2018-2019	PHYS – 2354	Digital Electronics	CO1	Understanding of Binary Numbers System an different logic gates, Karnaugh map, Combinational logic gates
				CO2	Understanding working principle of Flipflpts-RS Filpflop, JK Filpflop, JK-Master slave Filpflop,
				CO3	Understanding working principle of Multiplexrs, Counters, A/D and D/A Converters
				CO4	Study of Pin Configuration, Addressing modes, Instruction set of Microprocessors
				CO5	Study of Components of Microprocessors , Programming of Microprocessors.
8	2018-2019	PHYS – 362	Numerical Methods and Computational Physics	CO1	Understanding of Binary Numbers System an different logic gates, Karnaugh map, Combinational logic gates
				CO2	Understanding working principle of Flipflpts-RS Filpflop, JK Filpflop, JK-Master slave Filpflop,
				CO3	Understanding working principle of Multiplexrs, Counters, A/D and D/A Converters
				CO4	Study of Pin Configuration, Addressing modes, Instruction set of Microprocessors
				CO5	Study of Components of Microprocessors , Programming of Microprocessors.
8	2018-2019	PHYS – 363	Numerical Methods and Computational Physics	CO1	Understanding the properties of Nucles – Size, mass, Charge Desnsity, Binding Energy
				CO2	Understanding different Nuclear Model, Magic Numbers and Concept of Nucler Force.
				CO3	Understanding Radioactivity Delcay , Nuclear Reactions, Conservation Laws
				CO4	Understanding the basics of Particle Physics and Different Quantum Numbers conservation rules

	2018-2019	PHYS – 364	Renewable Energy and Energy harvesting	CO1	Understanding the importance of Alternative Soruces of Energy – Fossil fuels and Nuclear Energy etc
				CO2	Study of Solar Energy and its importance
				CO3	Importance of Geothermal Energy an Hydropower Recourses
				CO4	Importance of Electromagnetic Harvesting and Recent Applications –Environmental Issues
	2018-2019	PHYS – 355	Astrophysics	CO1	Understanding Radiointerferimetry –Characterstics and Properties. Working of Hubble Space Telescope
				CO2	Study of Astronomical Objects, Chandrasekhar limit, Schwarzschild Radius, Tidal and Planetesimal Theories
				CO3	Study of Solar System, Big bang Theory
				CO4	Application of Astrophysics, Rocket equations and Theory of Geosynchronous Satellite.
	2018-2019	PHYS – 365	Communication Electronics	CO1	Understanding Amplitude and Frequency Modulation
				CO2	Study of Image Transmission principle, Working of TV
				CO3	Study of Wave Propagation in Space
				CO4	Application of Communication Electronics