MSC PHYSICS

PHY1C01-Classical Mechanics

	Course Outcome
CO1	Student will be able to understand the features of generalized coordinates

CO2	Student will be understand the classical background of quantum mechanics
CO3	Student will be analyze Kinematics and Dynamics of Rigid Bodies
CO4	Student will be understand oscillations and Nonlinear oscillations

	PHY1C02- Mathematical Physics – I Course Outcome
CO1	Student will be able to understand the Detailed features of vectors,matrices and

	tensors
CO2	Student will be able to analyze differential equations and special functions
CO3	Student will be able to apply the Fourier series in physics

PHY1C03-Electrodynamics and Plasma Physics

	Course Outcome
CO1	Student will be able to understand the features of Time varying fields and Maxwell's equations.
CO2	Student will be understand the Plane electromagnetic waves, Transmission lines,

	Wave guides and cavity resonators
CO3	Student will be able to analyze Relativistic electrodynamics,
CO4	Student will be understand Plasma Physics

PHY1C04- Electronics

	Course Outcome
CO1	Student will be able to understand the construction and working of FET &MOSFET
CO2	Student will be able to understand the principle and working of micro photonic devices.

CO3	Student will be able to understand the basic operation of Op –Amp and its applications
CO4	Student will be able to understand the basics of digital electronics and its application

PHY2C05-Quantum Mechanics –I

	Course Outcome
CO1	Student will be able to understand the Formulation of Quantum Mechanics&Modern quantum mechanics
CO2	Student will be able to understand the

	Theory of Angular Momentum
CO3	Student will be able to understand the Invariance Principles and Conservation Laws

PHY2C06-Mathematical Physics

	Course Outcome
CO1	Student will be able to understand the Detailed features of Functions of Complex Variables, Group Theory
CO2	Student will be able to analyze Calculus of Variations
CO3	Student will be able to understand the Integral equations & Green's function

PHY2C07-Statistical Mechanics

	Course Outcome
CO1	Student will be able to understand The Statistical Basis of thermodynamics
CO2	Student will be able to analyze Microcanonical, Canonical and Grand Canonical Ensembles
CO3	Student will be able to understand Formulation of Quantum Statistics
CO4	Student will be able to understand the difference between Ideal Bose Systems & Ideal Fermi Systems

PHY2C08- Computational Physics

	Course Outcome
CO1	Student will be able to understand the Basics of Python programming and will acquire skills in writing and executing simple programs .
CO2	Student will be able to understand the applications of Python modules
CO3	Student will be able to understand the basic techniques of numerical analysis and apply to physical systems

PHY1L01-General Physics Practical

	Course Outcome
CO1	Apply and illustrate the concepts of properties of matter through experiments
CO2	Apply and illustrate the concepts of electricity and magnetism through experiments
CO3	Apply and illustrate the concepts of optics through experiments
CO4	Apply and illustrate the principles of electronics through experiments

PHY1L02-Electronics Practical

	Course Outcome
CO1	Apply and illustrate the principles of Opamp for mathematical operations through experiments
CO2	Apply and illustrate the principles of transistor amplifier through experiments
CO3	Apply and illustrate the principles of digital electronics through experiments

PHY3C09-Quantum Mechanics –II

	Course Outcome
CO1	Student will be able to understand the Time-Independent Perturbation Theory&Time-dependent perturbation theory
CO2	Student will be able to understand the Variational Method and WKB Method
CO3	Student will be able to understand the Relativistic Quantum Mechanics & Scattering

PHY3C10-Nuclear and Particle Physics

	Course Outcome
CO 1	Understand the basic aspects of nuclear structure and fundamentals of radioactivity
CO 2	Describe the different types of nuclear reactions and their applications
CO 3	Understand the principle and working of particle detectors
CO 4	Describe the principle of Nuclear electronics
CO 5	Understand the basic principles of elementary particle physics

PHY3C11-Solid State Physics

	Course Outcome
CO 1	Will be able to understand the basic aspects of crystallography in solid state physics
CO 2	Understand the phenomena of Lattice Vibrations,
CO 3	Understand the Properties of Semiconductors
CO 4	Describe the Dielectric, Ferroelectric and magnetic properties
CO 5	Describe the phenomena of Superconductivity

PHY3E05- Experimental Techniques

	Course Outcome
CO 1	Student will be able to understand the theory of Vacuum Techniques, Thin film techniques and Accelerator techniques
CO 2	Student will be able to analyze materials by nuclear techniques.
CO 3	Student will be able to apply X-ray diffraction technique for studying crystal structure

PHY3L05- Modern Physics Practical

	Course Outcome
CO 1	Apply and illustrate the concepts of Modern Physics through experiments
CO 2	Apply and illustrate the concepts of electricity and magnetism through experiments
CO 3	Apply and illustrate the concepts of optics through experiments
CO 4	Apply and illustrate the use of G.M counter experiments

Physics Practical PHY4L07-Computational

	Course Outcome
CO1	Student will be able to Apply the Basics of Python programming and will acquire skills in writing and executing simple programs.
CO2	Student will be able to understand the basic techniques of numerical analysis and
CO3	Student will be able to apply python programs to physical systems

PHY4C12-Atomic and Molecular Spectroscopy

	Course Outcome
CO1	Student will be able to understand the basics ideas of microwave and infra red spectroscopy
CO2	Student will be able to analyze molecules by Electronic Spectroscopy.
CO3	Student will be able to understand the basics ideas of Raman Spectroscopy.

PHY4E13- Laser Systems, Optical Fibres and Applications

	Course Outcome
CO1	Student will be able to understand the basics laser theory.
CO2	Student will be able to understand the concept of Non linear optics.
CO3	Student will be able to understand the application of laser.
CO4	Student will be able to understand the basics Optic Fibre.

PHY4E20: MICROPROCESSORS, MICROCONTROLLERS AND APPLICATIONS

	Course Outcome
CO1	Student will be able to understand the basics Microprocessor.
CO2	Student will be able to understand the Timing and control unit of a computer.
CO3	Student will be able to understand the Assembly Language Programe.
CO4	Student will be able to Apply the Assembly Language Programe for mathematical problems and in physical systems.
CO5	Student will be able to understand the basics Microcontroller and its programming

PHY4P01- Project

	Course Outcome
CO1	Understand research methodology
CO2	Understand and formulate a research project
CO3	Design and implement a research project
CO4	Identify and enumerate the scope and limitations of a research project