PROGRAM /COURSE OUTCOME

Programme with code - MSc Physics

Outcome of the Program: Provides an in depth knowledge of Physics to the students.

Course during the Program with code	Course outcome
PH010101- Mathematical methods in Physics-1	Make students have an idea of vector, matrices and tensors, its physical interpretation and applications.
PH010102- Classical Mechanics	Students will understand fundamental concepts of Langragian and the Hamiltonian methods, small oscillations, canonical transformations, central force and rigid body dynamics.
PH010103- Electrodynamics	Impart proper understanding of electricity magnetism and electrodynamics.
PH010104- Electronics	Students will learn all applications of electronics which involve the transmission of power and information.
PH010201- Mathematical methods in Physics-11	Introduced the concepts of Laplace and Fourier transforms, Fourier's series and its application to solution of partial differential equations.
PH010202- Quantum Mechanics-I	Develop basic structure of quantum mechanics. Students will understand the fundamental concepts of the Dirac formulation, quantum dynamics, basics of the quantum theory of angular momentum and solve the hydrogen atom problem.
PH010203- Statistical Mechanics	Introduce the statistical basis of Thermodynamics, Ensembles, quantum theory of gases and phase transitions.
PH010204- Condensed Matter Physics	Students learn about wave diffraction, reciprocal lattice, crystal symmetry, Free electron Fermi gas, Energy bands, phonons and magnetic properties of solids.
PH010205- General Physics Practical's	Expertise the students to do general physics practical's.
PH010206- Electronics Practical's	Students will learn to do electronics practicals.
PH010301- Quantum Mechanics-II	Extend the concepts developed in the course Quantum Mechanics I. The student will understand the different stationary state approximation methods, time -dependent perturbation theory, identical particles, Born approximation method of partial waves, applications and the basic concepts of relativistic quantum mechanics.
PH010302- Computational Physics	The student will have the idea about the techniques used in Physics to solve complex problems with the help of computers. Develops their own Algorithms of

	every method described in the syllabus.
PH010303- Atomic and Molecular Physics	Intended to develop the basic philosophy of spectroscopy. Equip the student to understand atomic spectra of one electron and two electron systems, theory of microwave, infrared and electronic spectroscopy's, Raman spectroscopy, non linear Raman effects, NMR, ESR and Mossbauer spectroscopy.
PH800301- Digital Signal Processing	Study about discrete time systems, FFT algorithms and design techniques of FIR and IIR digital filters.
PH010401- Nuclear and Particle Physics	Provide the student to build up fundamentals of nuclear and particle Physics. Students will have knowledge about properties of nucleus, nuclear forces, major models of the nucleus, nuclear decay process, nuclear reaction conservation laws in particle Physics nuclear astrophysics and practical applications of nuclear Physics.
PH800402- Micro Electronics and Semi Conductor Devices	Expose the students to the architecture and instruction set of basic microprocessors. Covers the fundamentals of semiconductor devices, their processing steps and able the students to use the knowledge of semiconductor fabrication processes to work industry.
PH800403- Communication Systems	Students will understand the basic concepts of different communication systems.
PH800404- Advanced Practical in Electronics	Expertise the students to do experiments in Microprocessor, Micro Controller, electronic instrumentation and optoelectronics.
PH010402- Computational Physics Practical's	Students will learn to develop algorithms /flowchart for all problems ,verification of numerical result were done if possible and training were given to use numerical methods to solve real Physics problems .
PH010403-Project	Students should be capable of doing research in the preliminary way.
PH010404-Comprehensive Viva voice	Students get an opportunity to recollect topics in all semesters, current and advanced topics.