PROGRAMME SPECIFIC OUTCOME OF PHYSICS DEPARTMENT

After completion of the programme:-

PSO 1: Student able to understand Newtonian mechanics and Lagrange's formulation.

PSO 2: Student able to understand Thermodynamics and wave equation.

PSO 3: Able to understand geometrical and physical optics.

PSO 4: Understand Electricity and magnetism.

PSO 5: Students are able to solve problems relating to vector and tensor.

PSO 6: Students are able to understand Quantum mechanical problems.

PSO 7: Students are able to use differential equation and series solution.

PSO 8: Students are able to understand electromagnetic theory and get introduction of relativity theory.

PSO 9: Students are able to understand atomic and molecular physics.

PSO 10: Students are able to understand electronics circuits and digital electronics.

PSO 11: Students are able to understand the statistical method to solve problems in dynamics.

PSO 12: Students are able to understand solid state physics.

PSO 13: Students are able to understand the nuclear physics and particle physics.

PSO 14: Students are able to understand the laser and its application.

COURSE OUTCOME OF PHYSICS

Course code: PHYM 101:

After completion of the course the students will be able to:-

CO 1: It covers Basic Newtonian mechanics.

CO 2: It explains forces and collisions including Kepler's law of planetary motion.

CO 3: It covers properties of matter ie moment of inertia, elasticity, surface tension etc.

CO4: It gives the basic concept of classical mechanics.

Course code: PHYM 201:

The following course:

CO1: Covers kinetic theory of gases.

CO2: Understanding of laws of thermodynamics.

CO3: Different laws of black body radiation are explained.

CO4: Waves and oscillations are covered.

Course code: PHYM 301:

The following course will:

CO1: Study on geometrical optics.

CO2: Explanation of interference of waves.

CO3: Diffraction and its various types are discussed.

CO4: Polarisation and dispersion are covered.

Course code: PHYM 302:

The following course will:

CO1: Electrostatic are introduced.

CO2: Current electricity is covered.

CO3: Magnetism is taught here.

CO4: Electromagnetic induction is explained.

Course code: PHYM 303:

Here students practically perform different experiments on mechanics and optics.

Course code: PHYM 401:

The course covers:

CO1: Various aspects of vector calculus are covered.

CO2: It gives insight of tensor algebra.

CO3: Some properties of matrices are explained.

CO4: Covers calculus of variation.

Course code: PHYM402:

The course covers:

CO1: An introduction of quantum mechanics.

CO2: Covers wave equation.

CO3: Operator formulation in quantum mechanics.

Course code: PHYM403:

The course covers:

Practical on optics, Waves and vibrations, mechanics are done.

Course code PHYM501:

The course covers:

CO1: Differential equations and special functions are covered.

CO2: Complex variables are taught.

CO3: It covers Fourier series.

Course code PHYM502:

The course covers:

CO1: Electromagnetic field theory is explained.
CO2: Propagation of electromagnetic waves are covered.
CO3: Understanding of special theory of relativity.

Course code PHYM503:

The course covers:

CO1: Covers quantum theory of atoms.
CO2: Fine structures of atoms are discussed.
CO3: Molecular spectra and lasers are covered.

Course code PHYM504:

The course covers:

CO1: An introduction to semiconductors.
CO2: Transistors and amplifiers are taught.
CO3: Oscillators and integrated circuits are covered.
CO4: Digital electronics is explained.

Course code PHYM505:

The course covers:

Experiments on electricity and electronics are performed.

Course code PHYM601:

The course covers:

CO1: An understanding on classical statistical physics.
CO2: Definitions and relations between entropy and partition function.
CO3: Quantum statistical physics.
CO4: Deals with the application of quantum statistical mechanics.

Course code PHYM602:

The course covers:

CO1: Covers various aspects of crystal structure.
CO2: Discussions on properties of solids.
CO3: Covers semiconductor materials and superconductivity.

Course code PHYM603:

The course covers:

CO1: Properties of atomic nuclei are covered here.
CO2: A qualitative discussion on nuclear models.

CO3: Nuclear reactions and cosmic rays covered here.
CO4: Elementary particles introduced.

Course code PHYM604:
The course covers:
CO1: Introduction to Lasers.
CO2: Laser system.
CO3: Properties of Laser radiation.
CO3: Laser applications.
CO4: Magneto-optics and electro-optics.

Course code PHYM605:
The course covers:
Laboratory experiments on electronics and optics are done.