

# Phy – 103 Elementary and Applied physics (Core)

## Objective:

- (1) To give knowledge about physical unit & unit system.
- (2) To provide basic understanding of application of physics in Home Science.
- (3) To aware students on all the necessary rules and laws of physics which are required to be known to home science students.

## Unit – 1

- Introduction: - Meaning, importance, branches and scope.
- Physical quantities, its units and unit systems.
- Motion:- basic concepts related to motion new tons laws of motion.
- Force:- Introduction, classification
- Common understanding of density, Mass, Weight.

## Unit – 2

- Work, power & energy.  
Definition, unit, types of energy conservation of energy.
- Heat & temperature :  
Meaning, measurement.
- Heat conduction, expansion.
- Specific and latent heat.
- Sound and waves:  
Types / classification and properties, Infrasonic sound, ultrasonic sound its use, echo.

## Unit – 3 Light

- Nature, properties of light.
- Reflection, reflection of light through lens, prism and mirror.
- Dispersion of light.
- Colours: Basic colours, spectra, rain bow.
- Electricity and Magnetism.
- Concepts related to magnetism and electricity.
- Application of magnetism & electricity.
- Battery – Types of battery, Door bell, Generator, Electric motor etc.

## Unit – 4 Instruments used in laboratory.

- Spectrometer, PH meter, colorimeter, centrifuge.
- Techniques of separation.
- Electrophoresis, chromatography.
- Radiation :- classification, properties and uses.
- Nano technologies: Introduction & uses.