



Telangana Social Welfare Residential Degree College



For Women- Nirmal -504106

Sri E.Venkateshwarlu,

Mobile:+91-7995660879

MA, B.Ed, M.Phil.

E-Mail: pri-rdcw-nrml-swrs@telanagna.gov.in

Principal_

DEPARTEMENT OF PHYSICS

PROGRAMME & COURSE OUTCOMES OF B.SC PHYSICS UNDER CBCS

PROGRAMME OUTCOMES

Upon Completing the B.SC Degree in the field of Physics, Students will attain:

- **PO 1: Knowledge:** Learners are encouraged to apply the knowledge of Physics fundamentals to solve complex problems in daily life.
- **PO 2: Designing Solutions:** Students are trained to think, design and conduct an experiment or a series of experiments that demonstrate their understanding of the methods and processes involved.
- **PO 3: Problem Analysis:** Students will be able to identify , formulate and analyze scientific problems and reach concrete solutions using various principles of Physics.
- **PO 4: Ethics:** The students will become well-groomed individuals who understand the significance of ethical values and abide by them even in the most difficult circumstances.
- **PO 5: Employability:** Students get various employment opportunities that are available in areas of their choice through the placement cell.

COURCES OUTCOMES FOR PHYSICS

SEMESTER- I

MECHANICS

Course Outcomes: Upon the successful completion of the course students will be able to,

- **CO 1:** Understand the concept of central forces and vector analysis.
- **CO 2:** Study the behavior of rigid body dynamics.
- **CO 3:** Understand the negative result of Michelson Morley experiment, Galileanand Lorentz transformation.
- **CO 4:** Investigate Young's modulus and rigidity modulus.
- **CO 5:** Understand various properties of liquids ie., Surface tension, refractive index, viscosity.

SEMESTER- II

THERMAL PHYSICS

Course Outcomes: Upon the successful completion of the course students will be able to:

- ❖ **CO 1:** Understand the concepts of Kinetic theory of gases.
- ❖ **CO 2:** Understand the concepts of Low temperature physics and black body radiation.
- ❖ **CO 3:** Understand the concept of Maxwell's Equations.
- ❖ **CO 4:** Understand thermal conductivity of a bad conductor by Lee's Method.
- ❖ **CO 5:** Understand Specific heat of a liquid by applying Newton's law of cooling correction.

SEMESTER – III

ELECTROMAGNETIC THEORY

Course Outcomes: Upon the successful completion of the course the students will be able to:

- ✓ **CO 1:** Study the electric field using coulomb's inverse square law in electro statics of current.
- ✓ **CO 2:** Understand the chemical and heating effect of current.
- ✓ **CO 3:** Understand the relation between B ,H and M.
- ✓ **CO 4:** Understand the faradays law of electromagnetic induction.
- ✓ **CO 5:** Understand the Thevenin Theorem, Norton Theorem, Superposition Theorem and maximum power transfer theorem.
- ✓ **CO 6:** To determine a small resistance by Carey Forster's bridge.
- ✓ **CO 7:** To determine the (a) current sensitivity (b) charge sensitivity and (c) CDR of a B.G.

SEMESTER – IV

WAVES AND OPTICS

Course Outcomes: Upon the successful completion of the course students will be able to:

- **CO 1:** Understand the concept of fundamentals of vibrations.
- **CO 2:** Understand the concept simple harmonic motion, Damped Oscillation and Forces oscillations. Understand the concept of vibrating strings and bars.
- **CO 3:** Understand the concept of laws of stretched strings.
- **CO 4:** Differentiate the phenomena of interference , Diffraction and polarization.
- **CO 5:** Understand measurement of wavelength using Newton's Rings method and minimum deviation, Normal method.
- **CO 6:** Understand Resolving power of telescope , Dispersive power of prism. Understand the optical rotation.

SEMESTER- V

MODERN PHYSICS

Course Outcomes: Upon the successful completion of the course students will be able to:

- ❖ **CO 1:** Understand the basic concepts of force between atom and bonding between molecules.
- ❖ **CO 2:** Understand wave Particle Duality deBroglie hypothesis ,Experimental confirmation of matter wave, Davission Germer Experiment , velocity of deBroglie wave.
- ❖ **CO 3:** Understand the concepts of Nuclear Physics like Size and structure of atomic nucleus and its relation with atomic weight..
- ❖ **CO 4:** Understand Atomic Spectra and Models of classical physics.

SEMESTER –VI

ELECTRONICS

Course Outcomes :Upon the successful completion of the courses students will be able to:

- **CO 1:** Analyze the relationship between conductors and insulators and super conductivity.
- **CO 2:** Understand Band theory of P-N junction , diodes and transistors.
- **CO 3:** Understand the importance of Digital Electronics.
- **CO 4:** Draw AND,OR,NOT,NAND and NOR circuits and Draw their Truth Tables.
- **CO 5:** Understand Characteristics of a Transistor in CE configuration and R.C. coupled amplifier – frequency response.
- **CO 6:** Understand De Morgan’s Theorem and Zener diode V-I charactersictics.