**Kurukshetra University Kurukshetra(COURSE OUTCOME)**

**Undergraduate Programs**

**Course: CC-1/MCC-1/SEM1**

After completing this course, the learner will be able to:

1. Understand the dynamics of system of particles, conservation of energy and momentum application of both translational and rotational dynamics motions simultaneously in analyzing rolling with slipping.
2. Differentiate between elastic and plastic body. Elastic constants, determination and their physical significance. Torque and its significance.

3. Familiar about the special theory of relativity and its applications. Michelson's Morley experiments and its finding.

4.Analyze the two body Central Force problem and its application

5. Learn to present observations, results, analysis and different concepts related to experiments of Mechanics.s

**Kurukshetra University Kurukshetra (COURSE OUTCOME)**

**Undergraduate Programs**

**Course: CC-2/MCC-3/SEM02**

After completing this course, the learner will be able to:

1. Explain and differentiate the vector and scalar formalisms of electrostatics. Also be able to apply Gauss's Divergence & Stokes theorem to solve various problems in electrostatics

2. Describe the magnetic materials & important properties of magnetic field. Understand the properties and theories of dia-, para- & ferromagnetic materials.

3. Derive Maxwell equations and their physical significance and familiar about the propagation of electromagnetic waves i.e. boundary conditions at the interface between different media. The students will also be able to have basic idea about the propagation of electromagnetic waves in free space and in medium.

4. Understand D.C. and A.C. circuits, able to apply and analyse using networks. Analyze DC/AC circuits consisting of parallel and/or series combinations of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.

5. Learn to present observations, results, analysis and different concepts related to experiments of Electricity and Magnetism.

**Kurukshetra University Kurukshetra (COURSE OUTCOME)**

**Undergraduate Programs**

**Course: CC-3/MCC-4/SEM03**

After completing this course, the learner will be able to:

1. Understand and describe the basic concepts and laws of thermodynamics

2. Apply the laws of thermodynamics to develop Maxwell's thermodynamic relations be able to understand their physical interpretations

3. Appreciate cellular nature of phase space and Have better knowledge of classical statistics which would result in greater insight into solutions of various complex problems

4. Have better understanding of quantum statistics and are in a position to extend the treatment to the analysis of complex problems

5. Learn to present observations, results, analysis and different concepts of experiments related to Thermodynamics & Statistical Physics

**Kurukshetra University Kurukshetra (COURSE OUTCOME)**

**Undergraduate Programs**

**Course: CC-4/MCC-6/SEM04**

After completing this course, the learner will be able to:

1. Have understanding of Interference - by Division of Wave front, by Division of Amplitude and Interference due to transmitted light & reflected light

2. Learn about Huygens-Fresnel's theory, diffraction at a straight edge and at a circular aperture, diffraction due to a narrow slit and due to a narrow wire. Understand and explain the Fraunhoffer diffraction, dispersive power of grating, Rayleigh's criterion and resolving power of telescope & a grating
3. Understand the theories and laws of polarization along with understanding of the production and detection of (i) Plane polarized light (ii) Circularly polarized light and (iii) Elliptically polarized light

4. Understand and appreciate the applications of Lasers in developing LED, Holography, in materials processing, in Medicine, Industry and Military. Have the idea of optical fibres, their properties and principle of propagation of electromagnetic waves through optical fibres

5. Understand various optical phenomena, principles, workings and applications optical instruments through Experiments

**Kurukshetra University Kurukshetra (CO)**

**Undergraduate Programs**

**Course: MDC-1/SEM1**

After completing this course, the learner will be able to:

1. Have knowledge about the nature, scope and impact of physics on technological development of the society.

2. Understand and describe motion of an object in one dimension.

3. Understand and describe the laws of motion and their applications in daily life.

4. Understand and appreciate the importance of laws of conservation of energy and momentum in daily life.

5. Learn to present observations, results, analysis and different concepts related to experiments of Physics Fundamentals .

**Kurukshetra University Kurukshetra (CO)**

**Undergraduate Programs**

**Course: MDC-2/SEM02**

After completing this course, the learner will be able to:

1. Have basic knowledge about nature of light, the associated phenomena and their importance in daily life

2. Understand and describe the working of important optical instruments through the learning of image formation by mirrors and lenses

3. Have basic knowledge about electric current, electric circuit, electric components, and practical utility of heating and magnetic effects of electric current

4. Grasp an introductory idea about the generation of Xrays, α-, β- and γ-rays through an understanding of composition of atom & nucleus

5. Understand the observations, results, analysis and different concepts related to experiments of light & optics.

**Kurukshetra University Kurukshetra (CO)**

**Undergraduate Programs**

**Course: MDC-3**

After completing this course, the learner will be able to:

1. Have introductory idea about the importance of semiconductors and basic semiconductor devices

2. Have the knowledge about the lasers and optical fibers and their importance in scientific and technological fields

3. Understand importance of radioisotopes, Nuclear fission and fusion reactions and their hazardous aspects also

4. Have the knowledge about the importance of some scientifically and technologically advanced materials.

5. Learn to present observations, results, analysis and different concepts related to experiments of Elements of modern Physics.