

## COURSE OBJECTIVES AND COURSE OUTCOMES

### F. Y. B. Sc. SEMESTER - I

#### SUBJECT: PHYSICS PAPER - I (USPH101)

Sr. No.	Course Objectives	Course Outcomes
1)	To explain Newton's laws and its applications	Students can apply Newton's laws in simplification of the motion of simple systems and formulate the free body diagrams to analyze the forces on the object
2)	To develop the concept of elasticity and its applications	Students can develop the concepts of friction and utilise the knowledge to solve problems based on it
3)	To analyse the theory of Fluid dynamics	Students can analyse basic concepts of fluid mechanics to solve problems based on it
4)	To discuss the working of a Lens system and the concept of aberrations	Students can apply the concepts of the lens system and its basic important application like microscopes
5)	To describe the concept of Interference of light	Students can explain interference of light and interference due to thin films
6)	To discuss the concepts of Thermodynamics	Students can develop basic knowledge of thermodynamics

## COURSE OBJECTIVES AND COURSE OUTCOMES

F. Y. B. Sc. SEMESTER – II

PHYSICS PAPER - I

SUBJECT: MATHEMATICAL PHYSICS (USPH201)

Sr. No.	Course Objectives	Course Outcomes
1)	Formulate the concepts from vector algebra such as scalar and vector fields, scalar and vector products, triple products.	Fathom Scalar and vector fields and their examples
2)	Introduce the ideas of gradient, divergence and curl	Analyse and develop concepts in gradient, divergence and curl and their applications in physical world
3)	Outline concepts in differential equations (first and second order) and their applications in simple electrical circuits	Solve the first and second order differential equations and unravel the corresponding applications in physical fields such as transient circuits
4)	Elucidate concepts in SHM's and superposition of collinear and perpendicular SHM, Lissajous figures, group velocity, phase velocity.	Comprehend formation of beats, Lissajous figures and their applications  Augment understanding of concepts of plane waves, group and phase velocity, spherical waves