

**M.Sc. (PHYSICS) Programme Structure**  
**Programme Code: MSCPHY-20**  
**First Semester**

**COURSE – 2 Classical Mechanics and Numerical Methods**

**Credits –3**

**Paper code: MPHY502**

**Total Marks: 50(Assignment 10 + Theory Exam 40)**

**BLOCK – IV: MECHANICS OF SYSTEM OF PARTICLES**

- UNIT 9 : Lagrangian Mechanics
- UNIT 10 : Lagrange's Equations
- UNIT 11 : Hamilton's Principle
- UNIT 12 : Hamiltonian Mechanics
- UNIT 13 : Canonical Transformations and Hamilton – Jacobi Theory
- UNIT 14 : Poisson's Brackets

**BLOCK – V: NUMERICAL METHODS**

- UNIT 15 : Numerical Interpolation
- UNIT 16 : Numerical Differentiation
- UNIT 17 : Numerical Integration
- UNIT 18 : Solutions Integration
- UNIT 19 : Numerical Solutions of Ordinary Differential Equations