

CURRICULUM DEVELOPMENT PLAN: Prof. Monika Bassi
B.Sc. (PHYSICAL SCIENCES, First Year, Semester I, NEP-UGCF
(Odd Semester, 2023-2024)
No. of Periods per week = 1

Name of Paper & Code	Allocation of Lectures	Month wise schedule followed by the Department	Tutorial/assignment/ Presentation etc.
Mechanics (DSC 1)			
<p>Unit 2</p> <p>Fundamentals of Dynamics: Dynamics of a system of particles, Centre of mass, determination of Centre of mass for discrete and continuous systems having spherical symmetry</p> <p>Conservation of momentum and energy, Conservative and non-Conservative forces, Work - Energy Theorem for conservative forces, force as a gradient of potential energy. Particle collision (Elastic and in-clastic collisions)</p>	7	August-September	<ul style="list-style-type: none"> • Syllabus Overview • Reference Books • Derivations • Related Problems • Problem solving • Assignments • Previous years Question Papers' problems • Students' difficulties
<p>Unit 5:</p> <p>Special Theory of Relativity: Frames of reference, Galilean transformations, inertial and non-inertial frames, Michelson Morley's Experiment, postulates of special theory of relativity, length contraction, time dilation, relativistic transformation of velocity, relativistic variation of mass.</p>	8	October-November-December	<ul style="list-style-type: none"> • Derivations • Related problems • Revisions • Practice Examinations • Discussion of Practice Examinations and last year Examination Papers • Tips for Final exams