DEPARTMENT OF PHYSICS
CHANDIDAS MAHAVIDYALAYA

A Govt. Aided Degree College Affiliated to the University of Burdwan
UGC Accrediated under section 2(f) & 12(B) [1979] * NAAC Accrediated in 2016
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Ref. No. *Date:*

Three-Year Minor Physics General Course (NEP)
Course Module (2023-24)

SEMESTER-I MINOR-I: PHYS1021MATHEMATICAL PHYSICS		Class
Module 1	• Calculus: Recapitulation • First Order and Second Order Differential equations • Calculus of functions of more than one variable	**3+9+6 = 15**
Module 2	• Vector Calculus: Recapitulation of vectors • Vector Differentiation • Vector Integration • Orthogonal Curvilinear Coordinates	**5+6+10+6 = 27**
MINOR-I: PHYS1021 MATHEMATICAL PHYSICS(Practical)		
Module 3	• Introduction and Overview: Computer architecture and organization, Memory, Input/Output devices.	**4**
Module 4	• Basics of scientific computing:	**6**
Module 5	• Errors and Error-Analysis	**6**
Module 6	• Review of C & C++ Programming Fundamentals	**14**
SEMESTER-II MINOR II : PHYS2021: MECHANICS		**Class**
Module 1	• Fundamentals of Dynamics	**6**
Module 2	• Work and Energy	**4**
Module 3	• Collisions:	**3**
Module 4	• Rotational Dynamics	**8**

Module 5	• Elasticity	**4**
Module 6	• Gravitation and Central Force Motion	**4**
Module 7	• Motion of a particle under a central force field	**6**
Module 8	• Oscillations	**6**
Module 9	• Non-Inertial Systems	**4**
MINOR II : PHYS2021: MECHANICS (Practical)		
Module 10	• To study the Motion of Spring and calculate (a) Spring constant, (b) g and (c) Modulus of rigidity.	**3+3+3**
Module 11	• To determine the Moment of Inertia of a Flywheel/regular shaped body	**3**
Module 12	• To determine g and velocity for a freely falling body using Digital Timing Technique.	**3**
Module 13	• To determine the Young's Modulus of a Wire by Optical Lever Method.	**3**
Module 14	• To determine the Modulus of Rigidity of a Wire by Maxwell's needle/dynamical method.	**3**
Module 15	• To determine the elastic Constants of a wire by Searle's method.	**3**
Module 16	• To determine the value of g using Bar pendulum/Kater's Pendulum	**3**
Module 17	• To determine the value of Young's Modulus by Flexure method.	**3**

K. Mandal

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