10 DAYS COURSE ON ADVANCE CLASSICAL MECHANICS

Organized by Department of Physics

Egra S.S.B College, Egra, Purba Medinipur, Pin-721429

- Title of the Course: **Advance Classical Mechanics**
- Nature of the Course: **Theory**
- Total Contact Hours: **30 hours**
- Opening of Registration Process: 01.11.2022
- Closing of Registration Process: 07.11.2022
- Date for Commencement of the Course: **09.11.2022**
- Closing Date of Course: **19.11.2022**
- Duration:**10 days**
- Total Number of Student Enrolled: **27 UG Students**
- Registration Fees: **Nil**

Course Coordinator:

Dr. Dipak Kumar Hazra, Assistant Professor and H.O.D, Dept. of Physics, Egra S.S.B College

Number of Faculty Involved:

Mr. Jyotirmoy Rath, SACT, Dept. of Physics, Egra S.S.B College

Mr. Sukdev Ghosh, SACT, Dept. of Physics, Egra S.S.B College

Miss. Suniti Pradhan, SACT, Dept. of Physics, Egra S.S.B College

Mr. Subhajit Jana, Guest Teacher, Dept. of Physics, Egra S.S.B College

Outcome of the Course:

- Students acquire basic knowledge of Mechanics, skills and techniques to solve a mechanical problem.
- Develop an understanding of the various frameworks like Newtonian, Lagrangian, Hamiltonian of classical mechanics.
- Critically evaluate the strengths and weaknesses of the different frameworks of classical mechanics.

Section -1: Structure of the course

Type	paper	Title of the Paper
Theoretical	I	Advance Classical Mechanics

Section -2: Syllabus of the Course

Paper -1: Advance Classical Mechanics

1. 1 Principle of least action and Lagrangian mechanics

1.2 Symmetries and conservation Laws, Central field motion

1.3 Euler angles, solid body motion

1.4 Motion in non inertial frames

1.5 Basic features of Hamiltonian dynamics

Sllabus Distribution

Sl.No	Faculty	Allotment
1	Dr. Dipak kumar Hazra	Basic features of Hamiltonian dynamics
2	Mr. Jyotirmoy Rath	Euler angles , solid body motion
3	Mr. Sukdev Ghosh	Symmetries and conservation Laws, Central field motion.
4	Miss. Suniti Pradhan	Principle of least action and Lagrangian mechanics.
5	Mr. Subhajit Jana	Motion in non inertial frames.

Routine

Subject: Advance Classical Mechanics

Duration: 09/11/2022-19/11/2022

Day/Time	09:15 – 10:15	3:30 – 4:30	4:30– 5:30
Monday	JR	DKH	SJ
Tuesday	DKH	SP	SG
Wednesday	JR	SP	DKH
Thursday	SJ	DKH	JR
Friday	JR	SG	SP
Saturday	SG	SP	JR

DKH= Dipak K. Hazra
JR= JyotirmoyRath
SG= Sukdev Ghosh
SP= Suniti Pradhan
SJ= Subhajit Jana

Course Co-ordinator HOD Principal