10 DAYS ADD ON COURSE ON ADVANCE MATHEMATICAL PHYSICS

Organized by Department of Physics

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

- Title of the Course: **Advance Mathematical Physics**
- Nature of the Course: **Theory**
- Total Contact Hours: **30 hours**
- Opening of Registration Process: 10.01.2023
- Closing of Registration Process: 15.01.2023
- Date for Commencement of the Course: **16.01.2023**
- Closing Date of Course: **25.01.2023**
- Duration:**10 days**
- Total Number of Student Enrolled: **29 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
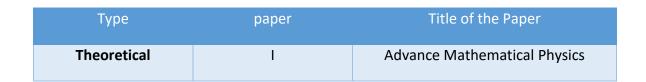Mr. Sukdev Ghosh, SACT, Dept. of Physics, Egra S.S.B College
Miss. Suniti Pradhan, SACT, Dept. of Physics, Egra S.S.B College
Mr. Subhajit Jana, Guest Teacher, Dept. of Physics, Egra S.S.B College

Outcome of the Course:

- ➢ Basic and advanced mathematical tools required for Physics Problems.
- ➢ Different Techniques to solve differential and integral equations.
- ➢ Various special functions and important transforms and their applications.
- ➢ Application of Vector Spaces & Matrices in the quantum world.

Section -1: Structure of the course

Type	paper	Title of the Paper
Theoretical	I	Advance Mathematical Physics

Section -2: Syllabus of the Course

Paper -1: Advance Mathematical Physics

1.1 Basic concept of advanced mathematics physics.

1.2 Div, Grad, Curl in Cartesian coordinates and integral theorems.

1.3 Div, Grad, Curl in non-Cartesian coordinates and Differential equations.

1.4 Introduction to tensors, eigen-values and vectors.

1.5 The Dirac delta function and other singular functions.

1.6 The Dirac delta function and other singular functions.

SAYLLABUS DISTRIBUTION

SI.No	Faculty	Allotment
1	Dr. Dipak kumar Hazra	Basic concept of advanced mathematics physics. Introduction to tensors, eigen-values and vectors.
2	Mr. Jyotirmoy Rath	Div, Grad, Curl In non-Cartesian coordinates and differential equation.
3	Mr. Sukdev Ghosh	Div, Grad, Curl in Cartesian coordinates and integral theorems
4	Miss. Suniti Pradhan	The Dirac delta function and other singular function
5	Mr. Subhajit Jana	The Dirac delta function and other singular functions.

Routine

Subject: Advance Mathematical Physics
Duration: 16/01/2023-25/01/2023

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