

Kabi Jagadram Roy Government General Degree College, Mejia, Bankura
Department of Physics
Certificate course
On
FUNDAMENTAL DISCOVERIES IN PHYSICS
2022-23

Brochure

Sl No.	Course Design				
1	Context	1.To develop the curiosity about the natural phenomena and the elements in scientific manner. 2. To meet the demand of experimental studies through hand on training of small instrument. 3. To reveal the holistic approach about man-environment relationship the different natural environment.			
2	Target Students	Current under graduate students having Physics, Geology, Mathematics and Economics as their Honours or Program subject. Students from other departments may also enrol themselves.			
3	Course Objective	1. To give an idea about the development of Physics as our daily life applications 2. To deliver the information about the history of a particular discovery starting from the ancient time. 3. To discuss about the life histories of eminent scientists associated with the discoveries.			
4	Faculty Requirement	Internal (Department of Physics)			
5	Modern Pedagogy	Students can grow their interest about the history of Physics through a long span from ancient age to modern age			
6	Course Fee	Nil			
7	Intake Capacity	Around 20			
8	Course Duration	12 th May, 2023 to 30 th May, 2023 (Two weeks): 30 hours			
9	Assessment Process	1. Attendance 2. Written Exam (MCQ) 3. Viva-voce			
10	Grading	Attendance (% age)	Marks	Total % age of marks obtained (as per Sl. No. 9)	Grade
		90 & above	05	80 & above	A ⁺
		80-89	04	60-79	A
		70-79	03	40-59	B ⁺
		60-69	02	30-39	B
		Less than 60	00	Less than 30	C

**DETAILED SYLLABUS OF THE CERTIFICATE COURSE:
2022-23**

Fundamental Discoveries in Physics

UNIT- 1:

Discoveries in ancient age [TIME: 2 HOURS]

Discoveries and life histories of Democritus, Aristotle, Ptolemy, Archimedes.

UNIT- 2:

Discoveries in 16th and 17th centuries [TIME: 6 HOURS]

Discoveries and life histories of Nicolaus Copernicus, Galileo Galilei, Robert Hook, Robert Boyle, Blaise Pascal, Christiaan Huygens, Isac Newton.

UNIT- 3:

Discoveries in 18th and 19th centuries [TIME :6 HOURS]

Discoveries and life histories of Antoine Lavoisier, Benjamin Franklin, Charles-Augustin de Coulomb, Thomas Young, John Dalton, Georg Ohm, Micheal Faraday, J C Maxwell, Gustov Kirchhoff, Peter Zeeman, Henri Becquerel, Curie.

UNIT-4:

Discoveries in 20th and 21st centuries [TIME:6 HOURS]

Discoveries and life histories of Max Planck, J. J. Thomson, Einstein, Ernest Rutherford, Niels Bohr, Paul Dirac, Max Born, James Chadwick, Recharad Feynmann, Peter Higgs

UNIT-5:

LAB [TIME :10 HOURS]

Hook's law, Ohm's law, Stefan's law, Laws of reflection and refraction, value of gravitational acceleration, Youngs modulus.