



Shrimathi Devkunvar Nanalal Bhatt Vaishnav College For Women (Autonomous)

Owned and Managed by Cork Industries Charities Trust
Affiliated to University of Madras - Re-Accredited with 'A+' Grade by NAAC - 4th Cycle

COURSE DATA SHEET

SEMESTER	I	BATCH	2026
COURSE NAME	Physics for Everyday Life	COURSE CODE	26UPHGE1001
COURSE UNITS	5	COURSE TYPE	Generic Elective(GE) - I
CONTACT HOURS (L-T-P)	4-0-2	CREDITS	5
OFFERED BY	Department of Physics	SHIFT (I / II) Shift I - 8:15 am - 12:50 pm Shift II - 1:00 pm - 5:30 pm	Aided

COURSE OBJECTIVES

	To introduce fundamental physics concepts using simple, everyday, non-technical examples accessible to all disciplines.
	To develop scientific temper and analytical thinking towards common physical phenomena and technologies.
	To relate principles of mechanics, heat, optics, sound, electricity and modern physics to daily life situations, safety, and gadgets.
	To develop skills in precision measurement techniques including the determination of material properties

COURSE OUTCOMES: On completion of the course the students will be able to...

	CO Statement	Cognitive Level
CO1	Explain fundamental concepts of mechanics and properties of materials and relate them to everyday motion and safety	
CO2	Describe heat and energy phenomena encountered in daily life and household appliances.	



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CO3	Develop scientific thinking and problem-solving skills.	
CO4	Explain the physics behind common technologies and natural phenomena	
CO5	Foster appreciation of the role of physics in society	

SYLLABUS

UNIT	TOPICS	HOURS
1	Physics around us : Measurement and SI units- Motion in daily life- Force and Newton's laws - Work, energy and power - Friction and its applications	15
2	Properties of Matter: Elasticity - Pressure -Density and buoyancy –Viscosity- Surface tension and capillarity -Applications in nature and technology	15
3	Heat, Light and Sound : Temperature and heat - Modes of heat transfer- Thermal expansion - Reflection and refraction - Lenses and vision - Sound, echo and noise pollution	15
4	Electricity and Magnetism: Static and current electricity - Electrical safety - Household electrical appliances - Magnetism and electromagnets -Electric motors and generators - Renewable energy sources	15
5	Practical Experiments: Simple experiments related to properties of matter, Heat, Light, Electricity and magnetism	15

TEXT/REFERENCE BOOKS/E - RESOURCES:

Text Books	• R.Murugesan, Allied physics I & II, S.Chand & Co pvt. Ltd., New Delhi, 2005. • R. Murugesan, Properties of Matter, S.Chand & Co pvt. Ltd., New Delhi, 2016. • Brijlal and N. Subrahmanyam, Properties of matter S.Chand & Co. Pvt. Ltd., New Delhi, 2005. •
Books For Reference	• D. Halliday, R. Resnick and K.S. Krane, Physics, 4th Edition, Vols.1,2,Wiley, NY, 1994. • Walker, J. — Fundamentals of Physics (Halliday/Resnick/Walker), Wiley — selected everyday-life sections. • Verma, H.C. — Concepts of Physics, Vol. I (Bharati Bhawan) — for foundational conceptual clarity. •



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E-Learning Resources	- NPTEL / SWAYAM courses on Physics in Everyday Life and General Physics. - Open-access simulations: PhET Interactive Simulations (University of Colorado Boulder).
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PEDAGOGY (TEACHING METHODOLOGY):

- Lecture-cum-demonstration using everyday objects and household appliances.
- Activity-based and case-study sessions (one per unit) for applied, collaborative learning.
- Use of simple simulations/videos to visualize abstract concepts without heavy mathematics.
- Group presentations and quizzes to reinforce conceptual understanding and communication skills.
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CO-PO AND CO-PSO MAPPING:									
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	2	2	2	2	1	3	2	3
CO2	3	2	3	2	3	1	3	2	3
CO3	3	2	3	2	3	2	3	2	3
CO4	3	2	2	2	2	1	3	2	3
CO5	3	2	3	3	3	2	3	2	3
Average (Use only filled in cells for calculation)	3	2	2.6	2.2	2.6	1.4	3	2	3

Correlation Level: 1-Low 2-Moderate 3-Strong