

Department of Physics  
D.L.S.P.G. COLLEGE, BILASPUR [C.G.]


Programme Outcome

B.Sc. (Physics, mathematics, chemistry/computer science/  
Information Technology)

After successful completion of U.G. degree program in  
physics a student should be able to:

- PO1 - To understand the basic laws and explore the fundamental concept of physics.
- PO2 - To carry out experiments to understand the laws and concept of physics.
- PO3 - Providing a hands on learning experience such as in measuring the basic concept in properties of matter heat, optics, electricity and electronics.
- PO4 - To recognize the importance of fundamental and Mathematical modeling simulation and computing.
- PO5 - To motivate the students to pursue PG courses in reputed institutions.

  
Department of Physics  
D.L.S.P.G. College, Bilaspur (C.G.)

  
**PRINCIPAL**  
D.L.S. P.G. College, Ashok Nagar  
Sarkanda, Bilaspur (C.G.)

# COURSE LEARNING OUTCOME

B.Sc. I<sup>st</sup> Year [Physics]

Paper - 1<sup>st</sup>

Mechanics, Oscillations and properties of matter.

course outcome

- CO1. Students will study the elastic behaviour and working of torsional pendulum.
- CO2. Study of bending behaviour and analyse the expression for young's modulus.
- CO3. Understand the surface tension and viscosity of fluid.
- CO4. Analyse waves and oscillations.
- CO5. Study the behaviour of rigid body dynamics. Understanding the dynamics and gravitation.

Paper - 2<sup>nd</sup>

Electricity, Magnetism and Electromagnetic theory

- CO1. Study the electric field using coulombs inverse square law in electrostatics of current.
- CO2. Analysis the chemical and heating effect of current.
- CO3. Understanding the Gauss's Green and Stoke's theorem.

CO4. Understanding the dielectric  
Ferroelectric and  
paraelectrics.

CO5. Study the diamagnetic  
paramagnetic and Ferromagnetic  
substances.

## Practical Outcome

01. students would perform  
basic experiment related to  
mechanics and also get familiar  
with various measuring  
instruments would learn the  
important of accuracy of  
measurements.

02: students would gain practical  
knowledge about electricity and  
magnetism and measurements  
such as Resistance, Voltage, current  
etc.

B.Sc. 2<sup>nd</sup> year [Physics]

or 1<sup>st</sup>  
thermodynamics kinetic  
theory and statistical  
physics

CO1: Understand the Bose-Einstein's and Fermi Dirac conditions Application of B-E and F-D statistics

CO2: The course comprises of study of thermodynamics the first and the Second law of thermodynamics.

CO3: Understand the concept of Gibbs's paradox, Boltzmann law, distribution law.

CO4 learn about thermodynamics laws and How to uses in our daily life.

CO5 Understand the Maxwellian distribution of speeds in an ideal gas and interference of light Knowledge to

Paper-2<sup>nd</sup>

waves acoustics and optics

CO1: The course comprises of the study of superposition of harmonic oscillations.

CO2 The course is important for the students to make their career in various branches of science and engineering.

CO3. Learn the Fermat's Principle Cardinal points of optical system.

CO4. Understand Application of Laser in communication Holography and non linear optics.

CO5 Understand wave equations in different medium solved its equations.

Practical Outcome

CO4. Learn about the canonical  
moment transformation.

01. Students will gain practical knowledge about interference of light biprism. 5
02. Learn about use of diffraction grating and its resolving limit. 15
03. Students would perform basic experiments related to LED, laser, microscope spectroscope.

Numerical Methods  
and programming

CO1: Learn scanf with  
specifier, format specifier  
for scanf, for loop, while  
loop, do while loop, goto

B.Sc. III<sup>rd</sup> Year [physics]

COURSE OUTCOME

Paper - 1<sup>st</sup>  
Relativity, Quantum Mechanics  
Atomic Molecular And Nuclear  
Physics.

CO1: Understand the Reference  
system and conservation laws  
theory of relativity.

CO2: To demonstration of matter  
waves. Davisson and Germer's  
experiment.

CO3: Learn about Schrodinger  
equation (one, two & three)

CO4: Understand the spectra  
of hydrogen, energies of  
molecules.

CO5: Learn about Interaction of  
charged particles and neutrons  
with matter, Nuclear reactions.

Paper - 2<sup>nd</sup>

solid state physics, solid  
state devices and  
Electronics

CO1: Learn about the brief idea  
crystalline and amorphous  
substance about Bragg's law,  
Bonding in solids.

CO2: Understanding the free electron  
model of metal Langevin's  
theory of dia and para magnetism  
learn the Curie Weiss law

CO3: Understanding the concentration  
in thermal equilibrium. learn  
about the tunnel diode, Zener  
diode FET, transistor CE and  
CB mode.

CO4: Enhance the about rectifier  
Filters, Wein Bridge Oscillator  
and Hartley oscillator.

or constant transformation.

COS: Understand the computer organisation learn about C programming and applications. to simple problems of arranging numbers in order array.

File

In any meter

of lines

Practical Outcome:

01: Student would be understand various type of diode and transistor understand the FET, zener diode and oscillator.

02. students would gain a hands on learning experience by performing experiments on these properties of materials.

or

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