Teaching Plan
(Session 2024-25)
Class- B.Sc. II (SEM – III) Teacher Name- Sunita Saini
Subject-Physics (THERMODYNAMICS)
CODE PHYB2301T

Sr. No.	Date	Topics to be covered
1.	1-3 Aug	**Section–A** Statistical definition of entropy, Change of entropy of a system, Additive nature of entropy. **Group Discussion about covered topics**
2.	5-10 Aug	Law of increase of entropy, Reversible and irreversible process and their examples. Workdone in a reversible process.
3.	12-17 Aug	Carnot's cycle, Entropy changes in Carnot cycle. Applications of thermodynamics to thermoelectric effect.
4	19 – 24 Aug	Change of entropy along a reversible path in a P-V diagram. **PPT On Topic**- Change of entropy along a reversible path in a P-V diagram. Entropy of a perfect gas
5.	26 – 31 Aug	Equation of state of an ideal gas from simple statistical consideration, Heat death of the universe.
6.	2 -7 Sep	**SECTIONB** Derivation of Maxwell's thermo dynamical relations.Cooling produced by adiabatic stretching, Adiabatic compression,
7	9- 14 Sep	Change of internal energy with volume, specific heat at constant pressure and constant volume.
8.	16-21 Sep	**Class Test** **Topic**- Cooling produced by adiabatic stretching, specific heat at constant pressure and constant volume.
9.	23-28 Sep	Expression for Cp -Cv, Change of state and Clayperon equation,
10.	30 Sep- 5 Oct	Thermodynamical treatment of Joule-Thomson effect.

11.	7 - 12 Oct	Liquefiction of helium, production of very low temperature by adiabatic demagnetization.
12.	14-19 Oct	**Assignment on Topic**- Use of Joule-Thomson effect, liquefiction of helium, **(BOYS)** Production of very low temperature by adiabatic demagnetization. **(GIRLS)**
13.	21- 26 Oct	MST
14.	28 Oct-2 Nov	REVISION AND TEST
15.	4- 9 Nov	REVISION AND TEST
16.	11- 16 Nov	REVISION AND TEST

Teaching Plan
(Session 2024-25)
Class- B.Sc. II (SEM – IV) Teacher Name- Sunita Saini
Subject-Physics (STATISTICAL PHYSICS)
CODE PHYB2402T

Sr. No.	Date/ Weekly	Topics to be covered
1.	**7-11 Jan**	**SECTION-A** Basic ideas of statistical physics, Scope of statistical physics, Basic ideas about probability.
2.	**13-18 Jan**	Distribution of four distinguishable particles in two compartment of equal size.
3.	**20-25 Jan**	Concept of macro states, microstates, thermodynamic probability, Effects of constraints on the system. **Group Discussion about covered topics**
4.	**27 Jan - 1Feb**	Distribution of n particles in two compartments. **Class Test** **Topic** Distribution of four distinguishable particles in two compartment of equal size.
5.	**3-8 Feb**	Equilibrium state of dynamic system. **PPT on Topic** Deviation from the state of maximum probability.
6.	**10-15 Feb**	Distribution of distinguishable n particles in k compartments of unequal sizes.
7.	**17-22 Feb**	**SECTION – B** Phase space and its division into elementary cells. Three kinds of statistics. **Class Test** **Topic** Distribution of distinguishable n particles in k compartments of unequal sizes.
8.	**24 Feb -1 Mar**	The basic approach in the three statistics.
9.	**3-8 Mar**	Maxwell Bolttzman (MB) statistics applied to an ideal gas in equilibrium.
10.	**10-15 Mar**	Experimental verification of Maxwell Boltzman law of distribution of molecular speeds.
11.	**17-22 Mar**	Need for quantum statistics-Bose-Einstein (B.E.) statistics.

12.	**24-29 Mar**	Fermi- Dirac Statistics (F.D).
13.	**1 -5 April**	**PPT on Topic:** Derivation of Planck's law of radiation
14.	**7-12 April**	Deduction of Wien's displacement law and Stefan's law from Planck's law
15.	**16-30 April**	**Assignment on Topic** Comparison of M.B., B.E. and F.D statistics
16.	**1 May……..**	REVISION