103102	Title: Heat& Thermodynamics	30 L
Unit 1	**Heat**	**15 L**
	Temperature and Heat: Common temperature scales, Kelvin temperature scale, thermometers, linear thermal expansions, volume thermal expansions, heat and thermal energy, heat and temperature change, heat and phase change, equilibrium between phase of matter, humidity. Ref: PHY 12.1 to 12.11. ***The Transfer of Heat:*** Convection, conduction, radiation, applications. Ref: PHY 13.1 to 13.5	
Unit 2	**Thermodynamics**	**15 L**
	The ideal gas laws and Kinetic theory: The mole Avogadro number, The ideal gas law, The kinetic theory of gases, Diffusion. Ref: 14.1 to 14.5 ***Thermodynamics.*** Thermodynamic system and surroundings, The Zeroth law of Thermodynamics, The first law of thermodynamics, Thermal process, Thermal process that utilizes ideal gas, Specific heat capacities and First law, The second law of thermodynamics, Heat engines, Carnot's principle and engine, Refrigerator, Entropy, The third law of thermodynamics, Concepts and calculation. Ref: 15.1 to 15.13.	

References:

Physics byCutnell and Johnson--- Wiley India Edition (5^{th} Edition). (PHY)

Additional References:

1. Fundamentals of physics by Alan Giambattista, betty McCarthy Richardson, Robert C Richardson- Tata McGraw Hill.
2. Physics: (Volumes I and II) H. C. Verma.
3. Physics: (Volumes I and II) by Resnick, Halliday and Krane- Wiley India Edition (5^{th} Edition)