

Al-Nahrain University
College of Science
Department of Physics

Subject: Thermodynamics
Year: Second year / 1st semester

Week	Topic Details
1	Macroscopic and microscopic system , quantities, thermodynamic system
2	Thermal equilibrium, processes, temperature, pressure, Zeroth law of thermodynamics
3	Heat transfer , conduction heat, Wiedmann law
4	Convection , Radiation, Black body
5	Plank's law , Wien's law , Steffan law
6	Newton law for cooling, 1 st law of thermodynamics
7	Heat, equation of state, equation of state for ideal gas
8	Heat capacity, adiabatic process
9	Bulk Modulus, Adiabatic rates of cooling
10	Work, P-V diagram
11	Heat engine
12	2 nd law of thermodynamics
13	Carnot cycle, Humidity
14	Entropy
15	Enthalpy, Helmholtz and Gibbs functions
16	Isothermic process
17	Cryogenics
18	Adiabatic cooling
19	Magnetic system
٢٠	Paramagnetism

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