Lecture		Reading*	Topic	Notes
Energy in Thermal Physics				
L1&2	24/02	S1.1-3 (p1-17)	Introduction to thermodynamics and PHYS2020; temperature and thermal equilibrium; equations of state: ideal and not-so ideal gases; equipartition	
L3&4	2/03	S1.4-6 (p17-29)	Heat and work; First Law of Thermodynamics, isothermal and adiabatic processes; heat capacities	
The Second Law				
L5&6	9/03	S1.6, S2.1, S2.5-6 (p29-35, 49-53, 68-75)	Heat capacities continued; enthalpy; multiplicity; entropy	
Interactions and Implications				
L7&8	16/03	S2.6, S3.1-3.2 (p75-108)	Second Law of Thermodynamics; entropy of mixing; entropy of an Ideal Gas; entropy and irreversible processes, thermodynamic temperature; entropy and heat.	Homework 1 due 5pm Friday this week.
L9&10	23/03	S3.3-6 (p108-121)	Paramagnetism; thermodynamic pressure; chemical potential; the Fundamental Thermodynamic Identity	
Engines and Refrigerators				
L11&12	30/03	S4.1-4 (p122-148)	Carnot cycle; heat engines and refrigerators; Joule-Thomson expansion	

S: Schroeder, “An Introduction to Thermal Physics”