Course Contents

Week	Content/ topic/ activity
1	The perfect gas and kinetic model
2	Real gases properties and internal energy
3	Enthalpy, thermochemistry
4	State functions, adiabatic changes
5	Definition and measurement of entropy
6	Combining the first and second laws
7	Chemical potential, equilibrium constant
8	Turbulence of equilibrium
9	Rates of reactions, integrated rate laws
10	Approaching equilibrium Arrhenius equation
11	Reaction mechanism, enzymes
12	Boltzmann distribution, partition function
13	Molecular energy, canonical ensemble
14	Derived functions, examples in research projects

Chapter 1 – Chapter 6