

Lecturer Title:

- 1- Solubility and distribution phenomena, solvent-solute interactions, solubility of gases in liquids, solubility of liquids in liquids, solubility of non-ionic solids in liquids, distribution of solutes between immiscible solvents.
- 2- Complexation, classification of complexes, methods of analysis, thermodynamic treatment of stability constants.
- 3- Kinetics, rate and orders of reactions, influence of temperature and other factors on reactions rate, decomposition of medicinal agents and accelerated stability analysis.
- 4- Interfacial phenomena, liquid interfaces, surface free energy, measurement of interfacial tension, spreading coefficient, surface active agents and wetting phenomena.
- 5- Colloids, dispersed system and its pharmaceutical application, types of colloidal systems, kinetic properties, diffusion, zeta potential, solubilization.
- 6- Micrometrics, particle size, methods of determining particle size, particle shape and surface area, porosity, density.
- 7- Rheology, Newtonian systems, thixotropy measurement, negative thixotropy, determination of thixotropy.
- 8- Polymer science, definitions pharmaceutical applications, molecular weight averages.