CL 203 Chemical Engineering Thermodynamics - I (2-1-0-6)

Thermodynamic systems; thermodynamic laws; equations of state; reversible and irreversible processes; entropy; application of first and second laws to steady/unsteady processes in open/closed systems; Gibbs and Helmholtz free energies; chemical potential and criteria of equilibrium; Maxwell equations and thermodynamic properties of pure substances; phase equilibria; chemical reaction equilibria; homogeneous reaction system.

Text Books:

1. J. M. Smith, H. C. V. Ness and M. M. Abott, Introduction to Chemical Engg. Thermodynamics, 7th Ed., McGraw Hill International Edition, 2010.

Reference:

1. S. I. Sandler, Chemical Engg. Thermodynamics, Wiley, New York, 1977.