

Texts and References**Required:** None**Recommended:**

- i) “Physical Kinetics”; E. M. Lifshitz and L. Pitaevski
- ii) “Nonequilibrium Statistical Mechanics”; R. Zwanzig
- iii) “Entropy Order Parameters and Complexity”; J. Sethna (online)
- iv) “A Kinetic View of Statistical Physics”; P. Kropivski, et al.

Reference:

- i) “Fluid Mechanics”; L. D. Landau, E. M. Lifshitz
- ii) “Stochastic Problems in Physics and Astronomy”; S. Chandrasekhar (online)
- iii) “Stochastic Processes in Physics and Chemistry”; N. G. Van Kampen
- iv) “The Mathematical Theory of Non-uniform Gases”; S. Chapman, T. Cowling
- v) “Statistical Physics”; L. D. Landau, E. M. Lifshitz
- vi) “Handbook of Stochastic Methods”; C. W. Gardiner
- vii) “Hamiltonian Chaos and Fractional Dynamics”; G. Zaslavsky
- viii) “Chaos in Dynamical Systems”; E. Ott
- ix) “Fluid Dynamics for Physicists”; G. Falkovich
- x) “Qualitative Methods in Physical Kinetics and Hydrodynamics”; V. P. Krainov
- xi) “Lectures on Phase Transitions and the Renormalization Group”; N. Goldenfeld
- xii) “Renormalization Methods — A Guide for Beginners”; D. McComb
- xiii) “Soft Matter Physics”; M. Doi
- xiv) “An Introduction to Chaos in Nonequilibrium Statistical Mechanics”; J. R. Dorfman
- xv) “Non-equilibrium Thermodynamics”; S. R. de Groot, P. Mazur

→ Additional references will be cited.

→ See “Handouts: Supplementary Materials” for online material.