

Non-Equilibrium Thermodynamics OR Irreversible Thermodynamics

Non-equilibrium thermodynamics, also called irreversible thermodynamics, deals with systems that are away from thermodynamic equilibrium and with the irreversible processes occurring in such systems. These processes involve the transport of heat, mass, momentum and electric charge due to appropriate driving forces.

The unit includes the thermodynamic criteria for non-equilibrium states, entropy flow and entropy production, entropy balance for irreversible processes, generalized fluxes and forces, phenomenological equations, stationary non-equilibrium states, microscopic reversibility, Onsager's reciprocal relations and electrokinetic phenomena.