

**Module-I: Processing of particulates**

Properties and handling of particulate solids, size reduction equipments- working principles of crusher, grinder and pulverizer, screening and particle size distribution.

**Module-II : Heat Transfer concepts and applications**

Heat transfer and drop wise condensation, Heat transfer to boiling liquid, working principles of different types of heat transfer equipments like heat exchanger, condenser, evaporator and autoclave.

**Module-III: Mass transfer concepts and applications**

Diffusion concepts: adsorption equilibria., working principles of mass transfer equipments like adsorber, absorber, distillation column and humidifier.

**TextBooks**

1. McCabe, Smith and Harriot, Unit Operations of Chemical Engineering
2. Foust et al, Principles of Unit Operations.
3. Treybal, R.E. Mass Transfer Operations
4. Badger and Banchero. Introduction to Chemical Engineering.
5. Foust, Wenzel, Clump, Maus and Andersen, Principles of Unit Operations.