

GUJARAT TECHNOLOGICAL UNIVERSITY

Chemical Engineering

M.E. Semester: II

Subject Name: **Advanced Heat Transfer (Major Elective - II)**

Sr. No.	Course Content
1.	Revision of basic laws with emphasis on laws of radiation, natural convection between stationary fluid and solid and natural convection between moving fluid and solid.
2.	Unsteady state heat transfer – Networking.
3.	Designing of extended surface equipments – fin tube heat exchanger, plate coolers.
4.	Designing of condenser with multicomponent feed.
5.	Designing of De-superheater, condenser / sub-cooler.
6.	Designing of Multiple effect evaporator.
7.	Designing of jet ejectors, vapor recompression systems.
8.	Designing of fluidized bed heating system.
9.	Designing of fluidized bed boilers.
10.	Heat transfer in fluidized bed.

Text Books:

1. Process Heat Transfer, by Donald Q. Kern, Tata Mc-Graw, - Hill Edition.
2. Chemical Engineering Handbook 7th edition by R.H.Perry & Green D.

Reference Book:

1. Introduction to Process Engineering and design by S.B.Thakore & B.I. Bhatt