

GUJARAT TECHNOLOGICAL UNIVERSITY
M.E.in Power Electronics & Electrical Drives
Semester: I

Subject Name: **Power Conditioning (Major Elective-I)**
Subject Code: **714505**

Sr. No	Course Content
1.	Non Linear Load Concepts of non-linear loads and electric power conditioning, unity power factor rectifier, STATCON (static condenser),
2.	SMPS: SMPS analysis, design and control, UPS on-line and off-line, power supplies
3.	Electrical Heating High frequency induction heating, Dielectric heating Power supplies in automobiles
4.	Filter: Passive filters, active filters for harmonic and reactive power compensation in two wire, three wire and four wire ac systems. Harmonic standards, power quality, surge suppressors, compensation of arc furnace and traction loads.
5.	Power supply: Power supplies for appliances such as camera, X-Ray equipments. Case studies on microcomputer and DSP control in active filters and power supplies.

Reference Book:

1. Recent IEEE publication & transactions on power electronics, industry applications and power delivery.