	Applied Mechanics Department Government Engineering College, Dahod-389151. **MID Semester Syllabus** Subject:- ADVANCED STEEL DESIGN
	Subject Code: 3722007 Division: ME- 2 Sem Faculties 1. Prof A R Darji (ARD) 2. Prof N B Umravia (NBU)

Sr No	Topics
1.	**Properties of Steel:** Mechanical Properties, Hysteresis, Ductility. Compactness and noncompactness, slenderness, residual stresses.
2.	**Plastic Behaviour of Structural Steel :** Introduction, Plastic theory, Plastic hinge concept, Plastic collapse load, conditions of plastic analysis, Theorem of Plastic collapse, Methods of Plastic analysis
3.	**Design of Industrial Buildings:** Introduction, selection of bay width, structural framing, purlins, girts and eave strut, plane trusses, Design of Gantry girders.
4.	**Design of cold formed sections:** Advantages, stiffened and un stiffened elements, local buckling and post buckling strength, shear lag and flange curling, unusually wide flange section, short span sections, members subjected to axial tension, compression and bending. Design of beams and columns, Introduction to pre-engineered buildings using cold formed sections.

HOD
Applied Mechanics Department