ADVANCED STEEL STRUCTURAL DESIGN

Course Code: 15CE2209 **L P C**
3 0 3

Course Outcomes:
At the end of the course, the student will be able to:

CO1: Analyse and design the Truss type Rolling stock (moving vehicles) and Pedestrian bridges.
CO2: Analyse and design High Tension Transmission line towers.
CO3: Analyse and design Self-supporting steel chimneys for Industrial purposes
CO4: Analyse and design North light roof trusses and Lattice girders for Industrial buildings.
CO5: Associate and perform analysis and design of elevated steel water tanks to store water.

UNIT-I (10-Lectures)
Design of pedestrian Bridge (N-Truss), Design of through type truss bridge member for dead load and equivalent live load including top, bottom bracings.

UNIT-II (10-Lectures)
Analysis and design for transmission line tower.

UNIT-III (10-Lectures)
Design of self supporting steel chimneys including foundations.

UNIT-IV (10-Lectures)
Design of North light trusses and Lattice girder.

UNIT-V (10-Lectures)
Design of elevated water storage steel tanks. Design for web crippling and lateral torsional buckling for girders

TEXT BOOKS

1. Ramchandra. *"Design of Steel Structures Vol. I & II",* 3rd Edition, Standard Book House, New Delhi, 1998

2. Duggal, S.K., *"Design of Steel Structures",* 3rd Edition, Tata McGraw-Hill Publications, 2006

REFERENCES

1. Indian Standard Code 800-2007.
2. Bureau of Indian Standard Code, Special Publications 36.
3. MBMA and AISC Hand Books