
ADVANCED STEEL STRUCTURAL DESIGN

Course Code: 13CE 2209

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4 0 3**Course Educational Objectives:**

1. To impart the knowledge on foot bridge, transmission towers, steel chimneys and through type truss bridge, gantry girder.
2. To familiarize the student with design of steel tanks and pre-engineered building systems.

Course Outcomes:

1. The students will demonstrate the ability to learn design and constructional aspects of steel structures.
2. To impart the students, with the knowledge of analysis and design for transmission line tower.
3. To impart the students, with the knowledge of design of self supporting steel chimneys including foundations.

UNIT-I

Design of pedestrian Bridge (N-Truss and Pratt), Design of through type truss bridge member for dead load and equivalent live load including top, bottom bracings and portal bracing.

UNIT-II

Analysis and design for transmission line tower.

UNIT-III

Design of self supporting steel chimneys including foundations.

UNIT-IV

Design of North light trusses and Lattice girder.

UNIT-V

Design of water storage and oil storage steel tanks.

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