09CE219 DESIGN OF STEEL STRUCTURES

Credits: 3:1:0
Objectives:
- The purpose of this course is to impart knowledge for the design of bolted and welded joints
- To impart the knowledge in the design of tension, compression members, beams, roof trusses, beam columns and beam-columns connections as per IS 800-2007

Unit I: Introduction & Design of bolts and welds
Design Loads and Load Combinations, Working Stress Design, Plastic Design, LRFD Methods, Introduction to Steel and Steel Structures, Design of structural fasteners: bolts and welds

Unit II: Limit state design of tension and compression members

Unit III: Limit state design of beams
Design of flexure members: Beams rolled sections, built-up sections, Design of eccentric connections: bolted and welded.

Unit IV: Limit state design of plate girders & beam columns
Design of welded Plate Girders, Design of beam columns and column bases,

Unit V: Design of roofs

Text Book:
1. Design of Steel Structures - N. Subramanian, Oxford University Press, USA, 2008

Reference Books:
5. Teaching Resource Materials on Steel – SERC, INSDAG, Anna University and IIT Madras, 2000