

INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI

भारतीय प्रौद्योगिकी संस्थान तिरुपति

| 1. | Title of the course | Basic Structural Steel Design |
|----|---------------------------------------------------------------------------------------------|---------------------------------------------------|
| 2. | Course number | CE301L |
| 3. | Structure of credits | 3-1-0-4 |
| 4. | Offered to | UG |
| 5. | New course/modification to | Modification To CE3101/8 |
| 6. | To be offered by | Department of Civil and Environmental Engineering |
| 7. | To take effect from | July 2022 |
| 8. | Prerequisite | Nil |
| | Course Objective(a). This source introduces the Limit State Design (LSD) philosophy and the | |

- 9. **Course Objective(s):** This course introduces the Limit State Design (LSD) philosophy and the design of steel structural elements as per IS 800: 2007. This course mainly emphasises on the design of tension members, compression members, column bases, beams, beam-columns and their connections using welds and bolts.
- 10. **Course Content:** This course introduces the Limit State Design (LSD) philosophy and the design of steel structural elements as per IS 800: 2007. This course mainly emphasises on the design of tension members, compression members, column bases, beams, beam-columns and their connections using welds and bolts.

11. Textbook(s):

- 1. Narayanan R, Kalyanaraman V, Santhakumar A R, Seetharaman S, Kumar S, Jayachandran A S and Senthil R, *Teaching Resource Materials for Structural Steel Design (1,2 & 3 Volumes)*, INSDAG Publications (2005).
- 2. Subramaniam N, *Design of Steel Structures : Limit State Method*, Oxford Higher Education (2008).

12. Reference(s):

- 1. Arya A S and Ajmani J L, Design of steel structures, Nem Chand & Bros (2007).
- 2. Sairam K S, Design of Steel Structures, Pearson Publications (2015).
- 3. INS/PUB/114, Design Manual for Designing Steel Structures According to New IS:800, INSDAG Publications (2010).
- 4. IS 800 : 2007, Code of Practice for General Construction in Steel, Bureau of Indian Standards (2007).