

VIKASH INSTITUTE OF TECHNOLOGY, BARGARH

LESSON PLAN

| Semester | :6th | Year: 2024-25 | Course: B.Tech | | | |
|----------|--------------|--|-----------------|----------------|--|--|
| | | Sub: Design of Steel Structures | Total Credit:03 | | | |
| Branch : | СЕ | Sub Code : | | | | |
| Name of | the Faculty: | Anjana Khamari | | | | |
| Designat | ion : | Assistant Professor | | | | |
| Departm | ent : | Civil Engineering | | | | |
| Session | | 2024-25 | | | | |
| | | Text book: 1. Design of Steel Structures- Limit State Method by N. Subramanian, Oxford University Press | | | | |
| | | 2 Limit State Design of Steel structures by S.K. Duggal Mc.Craw Hill | | | | |
| Recom | mended Books | 2. Limit State Design of Steel structures by S.K. Duggar, Mc-Graw film Reference Rooks: | | | | |
| | | 1. Design of steel structures by S.S.Bhavikatti, I.K. International Publishing house. | | | | |
| | | 2. Design of Steel Structures by K. S. Sairam, Pearson | | | | |
| Sl. No. | Lecture No. | Topics to be covered | | No. of Classes | | |
| | <u>I</u> | MODULE-1 | | | | |
| 1 | Lecture-01 | Tension members | | | | |
| 2 | Lecture-02 | types | | | | |
| 3 | Lecture-03 | net cross-sectional area | | | | |
| 4 | Lecture-04 | types of failure | | 8 | | |
| 6 | Lecture-06 | design of tension members | | | | |
| 7 | Lecture-07 | gusset plate. | | | | |
| 8 | Lecture-08 | | | | | |
| | | MODULE-2 | | | | |
| 9 | Lecture-09 | Compression members | | | | |
| 10 | Lecture-10 | effective length | | | | |
| 11 | Lecture-11 | slenderness ratio | | | | |
| 12 | Lecture-12 | types of cross-section | | | | |
| 13 | Lecture-13 | classification of cross section | | 10 | | |
| 14 | Lecture-14 | Design of axially loaded compression members | | 10 | | |
| 15 | Lecture-15 | lacing, battening | | | | |
| 16 | Lecture-16 | design of column bases | | | | |
| 17 | Lecture-17 | foundation bolts | | | | |
| 18 | Lecture-18 | Problem practice | | | | |
| MODULE-3 | | | | | | |
| 19 | Lecture-19 | Design of beams, types of c/s | | | | |
| 20 | Lecture-20 | lateral stability of beams | | | | |
| 21 | Lecture-21 | lateral stability of beams | | | | |
| 22 | Lecture-22 | Problem practice | | 9 | | |
| 23 | Lecture-23 | lateral torsional buckling | | | | |
| 24 | Lecture-24 | bending shear strength | | | | |
| 25 | Lecture-25 | web buckling and web crippling | | | | |
| 26 | Lecture-26 | deflection | | | | |
| 27 | Lecture-27 | design procedure | | | | |

| MODULE-4 | | | | | |
|----------|------------|--|---|--|--|
| 28 | Lecture-28 | Plate girders- various elements and design of components Eccentric and moment connections, | | | |
| 29 | Lecture-29 | roof trusses | | | |
| 30 | Lecture-30 | Problem practice | | | |
| 31 | Lecture-31 | Problem practice | | | |
| 32 | Lecture-32 | Problem practice | | | |
| 33 | Lecture-33 | Problem practice | | | |
| 34 | Lecture-34 | Problem practice | 8 | | |
| 35 | Lecture-35 | Problem practice | | | |

Signature of Faculty Member

Signature of HOD

PRINCIPAL