**MAHAMAYA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCE,**

**NUAPADA**

**LESSION PLAN FOR THE SESSION 2022-2023**

Branch: **CIVIL ENGINEERING**

Semester: **5TH SEM**

Subject: **SD-II**

 Name of the Faculty: **ER.PRIYABRATA SAHU**

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| **Class No.**  | **No. OF CHAPTER**  | **Topics to be Covered**  | **Remarks**  |
| 1  | Chapter-1 | 1.1 Common steel structures, Advantages & disadvantages of steel structures.  |   |
| 2  |  | 1.2 Types of steel, properties of structural steel. |   |
| 3  |  | 1.3 Rolled steel sections, special considerations in steel design.  1.4 Loads and load combinations. |   |
| 4  |  | 1.5 Structural analysis and design philosophy. 1.6 Brief review of Principles of Limit State design. |   |
| 5  |  | Contd. |   |
| 6  | Chapter-2 | 2.1 Bolted Connections 2.1.1 Classification of bolts, advantages and disadvantages of bolted connections  |   |
| 7  |  | 2.1.2 Different terminology, spacing and edge distance of bolt holes. 2.1.3 Types of bolted connections. |   |
| 8  |  | 2.1.4 Types of action of fasteners, assumptions and principles of design.  2.1.5 Strength of plates in a joint, strength of bearing type bolts (shear capacity& bearing capacity), reduction factors, and shear capacity of HSFG bolts |   |
| 9  |  | 2.1.6 Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces)  |   |
| 10  |  | 2.1.7 Efficiency of a joint.  |   |
| 11  |  | 22.2 Welded Connections |   |
| 12  |  | 2.2.1 Advantages and Disadvantages of welded connection  |   |
| 13  |  | 2.2.2 Types of welded joints and specifications for welding |   |
| 14  |  | 2.2.3 Design stresses in welds |   |
| 15  |  | .2.2.4 Strength of welded joints. |   |
| 16  | Chpter-3 | 3.1 Common shapes of tension members.  |   |
| 17  |  | Contd. |   |
| 18  |  | 3.2 Maximum values of effective slenderness ratio. |   |
| 19  |  | contd. |   |
| 20  |  | 3.3 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.) |   |
| 21  |  | contd. |   |
| 22  |  | contd. |   |
| 23 |  | contd. |   |
| 24 |  | contd. |  |
| 25 |  | contd. |  |
| 26 | Chapter-4 | 4.1 Common shapes of compression members. |  |
| 27 |  | 4.2 Buckling class of cross sections, slenderness ratio |  |
| 28  |  | 4.3 Design compressive stress and strength of compression members. |   |
| 29  |  | contd. |   |
| 30  |  | contd. |   |
| 31  |  | contd. |   |
| 32  |  | 4.4 Analysis and Design of compression members (axial load only). |   |
| 30  |  | contd. |   |
| 31  |  | contd. |   |
| 32  |  | contd. |   |
| 33  | Chapter-5 | 5.1 Common cross sections and their classification |   |
| 34  |  | 5.2 Deflection limits, web buckling and web crippling. |   |
| 35  |  | Contd. |   |
| 36 |  | 5.3 Design of laterally supported beams against bending and shear. |  |
| 37 |  | contd. |   |
| 38  |  | contd. |   |
| 39  |  | contd. |   |
| 40  |  | contd. |   |
| 41  |  | contd. |   |
| 42  |  | contd. |   |
| 43 | Chapter-6 | 6.1 Round Tubular Sections, Permissible Stresses |   |
| 44 |  | contd. |   |
| 45 |  | 6.2 Tubular Compression & Tension Members |   |
| 46  |  | contd. |   |
| 47 |  | contd. |  |
| 48 |  | 6.3 Joints in Tubular trusses |  |
| 49 | Chapter-7 | 7.1 Design considerations for Masonry walls & Columns |   |
| 50  |  | contd. |   |
| 51  |  | contd. |   |
| 52  |  | Load Bearing & Non-Load Bearing walls |   |
| 53  |  | Contd. |   |
| 54  |  | Permissible stresses, Slenderness Ratio |   |
| 55 |  | Contd. |   |
| 56  |  | Effective Length, Height & Thickness. |   |
| 57 |  | contd. |  |
| 58 |  | REVISION |  |

 

Signature of faculty member counter signature of HOD