

DISCIPLINE:CIVIL	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: RASMI GADAPALLA
SUBJECT NAME: STRUCTURAL DESIGN II	No. of Days per Week Class Alloted: 4days	Semester From Date: 15/09/2022 To Date: 22/12/2022 No of Weeks :15
Week	Class Day	Theory Topics
September 3rd week 4th week	3rd week- (1st,2nd,3rd,4th day) 4th week- 1st day	1 Introduction: 1.1 Common steel structures, Advantages & disadvantages of steel structures. 1.2 Types of steel, properties of structural steel. 1.3 Rolled steel sections, special considerations in steel design. 1.4 Loads and load combinations. 1.5 Structural analysis and design philosophy. 1.6 Brief review of Principles of Limit State design
September 4th week October 1st week 2nd week	4th week- (2nd,3rd,4th day) October 1st week - (1st,2nd,3rd,4th) 2nd week (1st,2nd,3rd day)	2 Structural Steel Fasteners and Connections. 2.1 Bolted Connections 2.1.1 Classification of bolts, advantages and disadvantages of bolted connections. 2.1.2 Different terminology, spacing and edge distance of bolt holes. 2.1.3 Types of bolted connections. 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 HSMG bolts. 2.1.6 Analysis & design of Joints using bearing type and HSMG bolts (except eccentric load and prying forces) 2.1.7 Efficiency of a joint. 2.2 Welded Connections: 2.2.1 Advantages and Disadvantages of welded connection 2.2.2 Types of welded joints and specifications for welding 2.2.3 Design stresses in welds. 2.2.4 Strength of welded joints.
October 2nd week 3rd week 4th week 5th week	2nd week- (4th day) week-(1st 2nd 3rd 4th day) week-(1st 2nd 3rd 4th day) week- 1st day	3 Design of Steel tension Members 3.1 Common shapes of tension members. 3.2 Maximum values of effective slenderness ratio. 3.4 Analysis and Design of tension members.(Considering strength only and concept of block shear failure.
5th week	1st day	Class test
October 5th week November 1st week 2nd week 3rd week	5th week- 2nd, 3rd,4th day week-1st ,2nd,3rd, 4th week-1st, 2nd, 3rd day	4 Design of Steel Compression members. 4.1 Common shapes of compression members. 4.2 Buckling class of cross sections, slenderness ratio 4.3 Design compressive stress and strength of compression members. 4.4 Analysis and Design of compression members (axial load only).
November 3rd week	3rd week -1st 2nd	Internal Assesment
November 2nd week 3rd week 4th week 5th week December 1st week	2nd week-(4th day) week - 3rd 4th day week -1st 2nd 3rd 4th day 1st day 1st, 2nd 3rd week- 4th 5th week- 1st week-	5 Design of Steel beams: 5.1 Common cross sections and their classification. 5.2 Deflection limits, web buckling and web crippling. 5.3 Design of laterally supported beams against bending and shear
December 1st week 2nd week	1st week-(3rd 4th day) 2nd week- 1st, 2nd 3rd,4th day	6 Design of Tubular Steel Structures: 6.1 Round Tubular Sections, Permissible Stresses 6.2 Tubular Compression & Tension Members 6.3 Joints in Tubular trusses
December 3rd week	3rd week- 1st 2nd 3rd 4th day	7 Design of Masonry Structures: 7.1 Design considerations for Masonry walls & Columns, Load Bearing & Non-Load Bearing walls, Permissible stresses, Slenderness Ratio, Effective Length, Height & Thickness.
December 3rd week	4th day	Class test

R. Gadapalla
29/9/22
Rasmi Gadapalla,
(Sr. Lecturer civil)