

DISCIPLINE: CIVIL	SEMESTER: 5TH	NAME OF THE TEACHING FACULTY: Mrs. RASMI GADAPALLA
SUBJECT NAME: STRUCTURAL DESIGN-II	No. of Days per Week Class Alloted: 3 days	Semester From Date: 01/08/2023 To Date: 30/11/2023 No of Weeks :18
Week	Class Day	Theory Topics
August(1st week, 2nd week)	1st week (day 1,2,3) 2nd week(day1)	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 (5P)
August(2nd, 3rd, 4th week)	2nd week(day 2,3) 3rd week(day 1,2,3) 4th week (day 1,2,)	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 HSFG bolts. 2.1.6 Analysis & design of Joints using bearing type and HSFG 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. (10P)
August(4th, 5th week) September(2nd week)	4th week (day 2,3) 5th week (day 1,2,3) September 2nd week (day 1,2,3)	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. (10P)

Rasmi Gadapalla.  
Senior Lecturer (Civil)  
31/11/2023

September(2nd ,3rd,4th ,5th week)	3rd week(day1,2,3) 4th week(day 1,2,3) 5th week (day 1,2)	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). (10P)
September(5th week)October(1st,2nd,3rd ,4th week)	5th week (day 2,3) 2nd week (day 2,3) 3rdweek (day 1,2,3) 4th week(day1)	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 (10P)
October(4th week)November(1st week)	4th week(day2,3,) 5th week (day 1) November 1st week(day 2)	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 (6P)
November(1st ,2nd,3rd,4th week)	2nd week (day 1,2,3) 2nd week (day1, 2,3) 4th week (day 1,)	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. (9P)

*Rasmi Sudapalla,*  
*(Senior Lecturer 21/11/2023)*