Republic of Iraq

Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Apparatus

College: Shatt Al-Arab University
Department: Civil Engineering
Stage: 3rd stage
Lecturer name: Dr. Jawad K. Mures
Academic title: Lecturer

Course Weekly Outline

Name	**Dr. Jawad K. Mures**			
E-mail address	jawadmures@gmail.com			
Course name	Theory of Structure-1			
Course objective	The course aims to introduce the basic methods in the analysis of statically determinate structures as an introduction to the analysis of statically indeterminate structures and structural design courses.			
Special Objectives	1- Understand the general principles of structural theory. 2- Understand how to analyze structural structures and convert internal forces into engineering drawings.			
References	Elementary Theory of Structures, Yan-Yu Hsieh Structural Analysis, RC. Hibbeler			
Course assessment	**Lab.**	**Quizzes and assessment**	**Mid-term exam**	**Final exam**
		10	**30**	**60**
General notes				

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Week No.	Theoretical	Experimental	Aims
1	Classification of structures and review of equilibrium		1- Providing basic methods in the analysis of statically determined structures as an input to the analysis of statically indeterminate structures and structural design courses.
2	Review of bending moment and shear force diagrams in beams		
3	Bending moment and shear force diagrams in frames		
4	Bending moment and shear force diagrams in frames		
5	Review of truss analysis		
6	Introduction to concept of influence lines		
7	Applications on influence lines for beams		
8	Applications on influence lines for trusses		
9	Applications on influence lines for trusses		
10	Determination of maximum reaction for series of moving loads		
11	Moment-area method		
12	Portal method		
13	Double-integration method		
14	Singularity function method		
15	Approximate method for truss analysis		