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-2			
Course objective	The course aims to expand on the concepts identified in the theory of structure-1, where the analysis of statically indeterminate structures is reviewed by imposing the conditions of the deformation form on the equilibrium of the origin. The methods used include the two main approaches in the analysis methods: the group of force methods (such as the compatible distortions method) and the set of displacement methods.			
Special Objectives	1- Understand the general principles of structure theory. 2- Understand how to analyze structures and convert internal forces into engineering drawings in more comprehensive ways.			
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	Introduction to virtual work methods		Expand on the concepts identified in the theory of structure-1, where the analysis of statically indeterminate structures is reviewed by imposing the conditions of the deformation form on the equilibrium of the origin. The methods used include the two main approaches in the analysis methods: the group of force methods (such as the compatible distortions method) and the set of displacement methods.
2	Deflection by virtual work method: Trusses		
3	Deflection by virtual work method: Beam		
4	Deflection by virtual work method: Frames		
5	Analysis of statically indeterminate structures by force method: Introduction		
6	Analysis of statically indeterminate structures by force method: Trusses		
7	Analysis of statically indeterminate structures by force method: Beams		
8	Analysis of statically indeterminate structures by force method: Frames		
9	Analysis of statically indeterminate structures by slope deflection method: Introduction		
10	Analysis of statically indeterminate structures by slope deflection method: Beams		
11	Analysis of statically indeterminate structures by slope deflection method: braced Frames		
12	Analysis of statically indeterminate structures by slope deflection method: Frames with side sway		
13	Analysis of statically indeterminate structures by moment distribution method: Introduction		
14	Analysis of statically indeterminate structures by moment distribution method: Beams		
15	Analysis of statically indeterminate structures by moment distribution method: Frames		