## Republic of Iraq

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



College: Shatt Al-Arab University
Department: Civil Engineering

Stage: 3<sup>rd</sup> 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	<ul><li>1- Understand the general principles of structure theory.</li><li>2- Understand how to analyze structures and convert internal forces into engineering drawings in more comprehensive ways.</li></ul>			
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		-		•

## Republic of Iraq

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



College: Shatt Al-Arab University
Department: Civil Engineering

Stage: 3<sup>rd</sup> stage

Lecturer name: Dr. Jawad K. Mures

**Academic title: Lecturer** 

## **Course Weekly Outline**

Week No.	Theoretical	Experimental	Aims
1	Introduction to virtual work methods		he he he ls:
2	Deflection by virtual work method: Trusses		ere thing the find the Tribod sthool
3	Deflection by virtual work method: Beam		vho osi igi igi me me
4	Deflection by virtual work method: Frames		np, vor or is
5	Analysis of statically indeterminate structures by force method: Introduction		ure-1 by ir the the lalys ortio
6	Analysis of statically indeterminate structures by force method: Trusses		ructuwed mofile an of dist
7	Analysis of statically indeterminate structures by force method: Beams		of st eviev briun in th
8	Analysis of statically indeterminate structures by force method: Frames		ory ory quilli quilli thes
9	Analysis of statically indeterminate structures by slope deflection method: Introduction		in the theory of structure-1, where the structures is reviewed by imposing the n on the equilibrium of the origin. The n approaches in the analysis methods: as the compatible distortions method).s.
10	Analysis of statically indeterminate structures by slope deflection method: Beams		led in tate struorm or main a tch as nods.
11	Analysis of statically indeterminate structures by slope deflection method: braced Frames		identifitermin ation for two 1 ods (su
12	Analysis of statically indeterminate structures by slope deflection method: Frames with side sway		cepts j ly inde leforma ude the metho
13	Analysis of statically indeterminate structures by moment distribution method: Introduction		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.
14	Analysis of statically indeterminate structures by moment distribution method: Beams		nd on a sis of a tions of the code use toup o
15	Analysis of statically indeterminate structures by moment distribution method: Frames		Expar analys condi metho the gr and th