Ministry of Higher Education and Scientific research



**Department of Civil Engineering** 

**College of Engineering** 

University of Salahaddin-Hawler

Subject: Elective course-Etabs Course Book -4<sup>th</sup> year civil Eng. students

Lecturer's name: Dr. Ali Ramadhan Yousif and Ari Omer Ismail

Academic Year: 2021/2022

1. Course name	Elective course/ Fall semester and Spring semester		
2. Lecturer in charge	Dr. Ali Ramadhan Yousif and Ari Omer Ismail		
3. Department/ College	Civil / Engineering		
4. Contact	e-mail: ali.yousif@su.edu.krd		
	dr.ali.r.goran@gmail.com		
	Tel: (optional) 07504661557		
	And 07814661557		
5. Time (in hours) per week	Theory: 0		
	Tutorial: 0		
	Credits: 2		
6. Office hours	According to my arranged time table		
7. Course code	0111		
8. Teacher's academic profile	1- Ph. D. in Structural Engineering – University of Salahaddin –		
	Arbil, Iraq, 2006		
	2- M. Sc. In Structural Engineering – University of Mosul –		
	Mosul, Iraq, 1986		
	3- B. Sc. In Civil Engineering – University of Mosul – Mosul,		
	Iraq, 1983		
	Now: Professor of Structural Engineering		
9. Keywords	Sotware, structural analysis and design, etabs		

# **Course Book**

### **10. Course overview:**

It is very important material specially for engineers. Knowing knowledge of how to deal with software to analyze and design then checking by hand calculations is very necessary for structural engineer.

### 11. Course objectives:

Making the students familiar with the methods that are necessary to solve their design problems by software. Also to expand their thoughts regarding understanding and solving engineering problems.

### 12. Student's obligation

- **1. Attendance:** Students are required to attended lectures. Regular attendance is necessary to maintain pace with the lectures.
- **2.** Maximum absence allowed per semester are 4 hrs. (=13 %). After that, taken 1 mark cancelled for each hour's absence from final mark.
- 3. Home Works: Homework will be assigned according to instructor.

**4. Short Quizzes may be given periodically:** The quizzes are done during the 25 to 35 minutes of the lecture period or at time fixed by instructor.

### 13. Forms of teaching

Different tools and techniques will be used to attain goals and objectives. The following forms are used:

a. Power point for main parts (head titles, definitions, objectives, cases, design tables, charts and mathematical equations, also examples, ....) for each subject.

b. White board will be used for presenting and solving different examples (mostly used).

c. Students will be called to submit assignments defined in advance.

d. Students have to participate in classroom discussions. The attendance (as much as possible) will take in consideration for students.

### 14. Assessment scheme

There will be one exam given in semester. There will also be a final exam given during final weeks of 1st semester at the time scheduled by the university. Details regarding exam content, etc. will be given in class as the exam dates draw near.

# The final grade will be assigned as follows:

Exam	Date	Time	Weight
Quizzes	At any time during	Assigned by	10 marks
	the lecture	instructor	
Assignments	Fixed date	Assigned by	10 marks
		instructor	
Exam 1	A week from day	Assigned by	30 marks
	assigned	instructor	
Final Exam	At the last weeks of	9:00 - 11:00	50 marks
	fall or spring	am	
	semesters scheduled		
	by the University		

## **15. Student learning outcome:**

The students had taken some of more advance and applicable software that help them during their life. The outcomes will be through different applications of the subject, especially for the analysis and design of projects.

# **16. Course Reading List and References:**

- 1. Etabs software and what content
- 2. Lecture Notes.

### 17. The Topics:

17. The Toples.		
Week	Topics	name
1	Introduction and general review	
2	Software set up and how to deal with	
	<u>Week</u> 1 2	Week Topics   1 Introduction and general review   2 Software set up and how to deal with

Lecturer's

	3	Typical example showing how to draw walls, columns beams	Ali
		and slabs	Ramadhan
	4	Typical example cont`d.	Y OUSIT
	5	Typical example cont`d.	Ari Omer
	6	How to define loads	Ismail
	7	Self-weight and live loads	
	8	How to analyse	
	9	Getting results of analysis	
	10	How to design	
	11	Getting results of design	
	12	Midterm exam	
	13	General review and comments	
	14	General review and comments cont`d.	
	15	Final exam	
		Second semester	
	1	General review	
	2	How to define wind load and seismic load	
	3	How to define wind load and seismic load cont'd.	
	4	How to define omega, r and other factors	
	5	Analysis with wind and seismic	
	6	Quiz	
	7	How to deal with results of analysis	
	8	Getting design results of analysis	
	9	Midterm exam	
	10	Checks to done	
	11	Checks to be done cont`d.	
	12	General notes about the design by software	
	13		
	14		
	15	Final exam	
	Notes	The course will include assignments and quizzes.	
18. Extra notes:			

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### پيداچوونه وه ی هاوه ڵ 19. Peer review

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).

ئه م كۆرسبووكه ده بنّت لُه لايّه ن هاوه لْيَكَى ئه كاديميه وه سه ير بكرنّت و ناوه رۆكى بابه ته كانى كۆرسه كه په سه ند بكات و جه ند ووشه يه ك بنووسنّت له سه ر شياوى ناوه رۆكى كۆرسه كه و واژووى له سه ر بكات

هاوه ڵ ئه و که سه یه که ز انیاری هه بنت له سه ر کۆرسه که و ده بیت پله ی ز انستی له ماموّستا که متر نه بنت