



College: Engineering

Department: Civil Engineering

Course Title: Building Construction

Course No: : **0901401**

Credit Hours: 3

Semester: First /2020-2021

### About The Course

Course Title: Building Construction

Class: Third year

Course No: **0901401**

Credit Hours: 3

Lecture Room: 410

Time: 12:30 – 14:00 pm

Obligatory/ Optional: Obligatory

Text Book: Francis D. K. Ching, Building Construction Illustrated, 5th Ed 2014 .

### The Instructor

Name: Dr. Essam Ali Mahmood

Title: Assistant Professor

Office Tel:

Office No:

Office Hours: **12:30-1:30**

E-maile: [e.a.alnuaimy@gmail.com](mailto:e.a.alnuaimy@gmail.com)

## Course Description

Students in this course are introduced to the structural members of building and their function in creating equilibrium and stability of the structure. Universally and locally construction materials are covered in this course. This course will enable students comprehend more advance courses in following levels.

## Course Objectives

- Recognize the function of each Structural member
- Recognize how the system gains its equilibrium and stability.
- Recognize the construction materials in civil engineering and its properties.
- Develop a good feeling to the process of analyzing and designing of building when completing more advance related topics

## Learning Outcome

1. Recognize the function of each Structural member.
2. Recognize how the system gains its equilibrium and stability.
3. Develop a good feeling to the process of construction when completing more advance related topics.
4. Read and understand structural plans and details.

## Course Outline and Time schedule

Week	Course Outline
First week	Introduction: construction building stages, types of building systems.
2 <sup>nd</sup> week	Earth work: Excavation and filling process.
3 <sup>rd</sup> week	Foundations: types and functions.
4 <sup>th</sup> week	Columns: types and functions.
5 <sup>th</sup> week	Beams: types and functions
6 <sup>th</sup> week	Slabs: Solid, hollow and waffle types ,transfer of load to supporting beams
7 <sup>th</sup> week	Walls: Structural Walls, Architecture Walls: types

	and functions.
8 <sup>th</sup> week	Lintels: dimensions and requirement by building code.
9 <sup>th</sup> week	Stairs: Types, dimensions and functions.
10 <sup>th</sup> week	Masonry Work : building stones. Local terminology and methods of construction
11 <sup>th</sup> week	Timber and form work : Concrete vertical and lateral Pressure on Formwork
12 <sup>th</sup> week	Joints in Structures: requirements and functions.
13 <sup>th</sup> week	Construction materials: concrete: preparing, mixing, handling, placing and compacting.
14 <sup>th</sup> week	Reading Structural Plans and details of different members.
15 <sup>th</sup> week	Reading Structural Plans and details of different members.

### **Presentation methods and techniques**

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

- 1- Lecturing with active participations.  
Involve the civil engineering students in asking some questions related to the target topic of the course.
- 2- Problem solving.  
Encourage the students to solve the given assignments and submit them at the definite time,
- 3- Cooperative learning.  
By enhancing the students studying in groups .
- 4- Discussion.  
To discuss the results and the answers of the target problems.
- 5- Learning by activities.  
To encourage the students to some group activity.
- 6- Connecting students with different sources of information.
- 7- Connecting students with different sources of information

## Sources of information and Instructional Aids

Computer  
power point  
White Board  
Library sources

## Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated  
Through: feed back and the skills that are acquired by the students  
The tools:

- 1- Formal (stage) evaluation
  - a) Class Participation 10%
  - b) Ist Exam 15%
  - c) 2nd Exam 15%
  - d) Group activity and Quizzes 10%

## Tool & Evaluation

Tests are permanent tools & assessment, in addition to the activity file which contains curricular and the co-cussiclor activities, research, report papers and the active participation of the student in the lecture.

The following table clarifies the organization of the assessment schedule:

Test	Date	Grade
First Exam	31/3/2019	15%
2 <sup>nd</sup> Exam	1/5/2019	15%
Activities & Participation and Quizeez	Students should be notified about their marks	20%
Final Exam		50%

## Activities and Instructional Assignment

- 1- Practical assignments to achieve the syllabus objectives.
- 2- Quizes

**Regulations to maintain the teaching-Learning Process in the Lecture:**

- 1- Regular attendance.
- 2- Respect of commencement and ending of the lecture time.
- 3- Positive relationship between student and teacher.
- 4- Commitment to present assignments on time.
- 5- High commitment during the lecture to avoid any kind of disturbance and distortion.
- 6- High seuse of trust and sincerity when referring to any piece of information and to mention the source.
- 7- The student who absents himself should submit an accepted excuse.
- 8- University relevant regulations should be applied in case the studen,s behavior is not accepted.
- 9- Allowed Absence percentages is ( 15 %).

**References :**

**1** Fundamentals of Building Construction: Materials and Methods 6th Edition, Kindle Edition, 2013.

# Syllabus Classification

<b>Objectives</b>	<b><i>Learning outcome</i></b>	<b><i>Assessment tools</i></b>
<input type="checkbox"/> Recognize the function of each Structural member	ABET 3a, 1c, 3e	Quize+Exams
<input type="checkbox"/> Student will be able to analyse force systems (2D and 3D)	ABET 1a, 3a, 3e	Quize+Exams
<input type="checkbox"/> Recognize the construction materials in civil engineering and its properties.	ABET 3a, 3e	Quize+Exams
<input type="checkbox"/> Develop a good feeling to the process of analyzing and designing of building when completing more advance related topics	ABET 3a, 2c, 1e	Quize+Exams