

COURSE PLAN

FIRST: BASIC INFORMATION

College

College	: Karak University College
Department	: Department of Basic and Informatics Sciences

Course

Course Title	: Construction Drawing
Course Code	: 020112283
Credit Hours	: 2 (0 Theoretical, 2 Practical)
Prerequisite	: 020000171*
	*Co-requisite

Instructor

Name	: Majd Ali Al-Saraireh
Office No.	: -
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Office Hours	: -
Class Times	

Text Book

- Title: A Course in Civil Engineering Drawing Paperback, Dr. N. Kumara Swamy, A. Kameswara Rao, 2019, Charotar Publishing House Pvt. Ltd.

References

- الرسم الهندسي المدني- محمد الدرايسة, مكتبة المجتمع العربي للنشر والتوزيع 2013
- الرسم المعماري - محمد عبدالله الدرايسة
- البسيط في هندسة الطرق (ج1+ج2), د.روحي الشريف.

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

Understanding detailed civil engineering drawings related to several building elements considering standards and qualifications associated with the concrete and reinforced concrete work, and taking into account metal, wood and soil works.

COURSE OBJECTIVES

The objective of this course is to enable the student to do the following:

- Recognize the drawings principles and its major categories and components.

- Express in details the construction drawing principles.
- Express how to read and create construction engineering drawings.
; beams, columns, slabs, footings, walls & floors, electrical & sanitary facilities
- Express (include Read & draw) the metal structural components in several facilities.

COURSE LEARNING OUTCOMES

On successful completion of this course, students are expected to be able to:

- CLO1. Recognize the working knowledge of several types of drawing and basic principles of structural drawing such as types of lines and shading
- CLO2. [Explain the principles of detailed drawing](#)
- CLO3. Express (include Read & draw) the details of reinforcement for beams
- CLO4. Express (include Read & draw) the details of reinforcement for Columns
- CLO5. Express (include Read & draw) the details of reinforcement for slabs
- CLO6. Express (include Read & draw) the details of reinforcement for walls and foundation
- CLO7. Describe how to read and draw the types of electrical and sanitary schematics in various facilities.
- CLO8. Express (include Read & draw) the details of steel design elements

COURSE SYLLABUS

Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
1	Introduction	<ul style="list-style-type: none"> • An introduction to drawings principles. • Engineering drawing major categories and components such as solid and hidden lines, and hatching. • Engineering drawing major features and characteristics. • Important considerations when new civil engineers start to draw civil structures and plans. 	CLO1	
2	Methods of drawing	<ul style="list-style-type: none"> • Major principles needed for using engineering drawing instruments correctly. • Introduction to the importance of engineering drawing for engineers. • Important steps for reading an engineering drawing. • Methods significant to describe the engineering details. 	CLO1	
3	Plans and Engineering Projections	<ul style="list-style-type: none"> • Read and understand several engineering drawings' elements. • Numerate several construction facilities. • Collecting data from engineering drawings. • Learn the definition and importance of 	CLO2	



Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
		engineering projections.		
4	Plans and Engineering Projections	<ul style="list-style-type: none"> • Learn how to make orthographic projections. • Learn how to make axonometric projections. • Learn how to make oblique projections. • Learn how to make perspective projections. 	CLO2	
5	Beams	<ul style="list-style-type: none"> • Definition of beam, types of beams, importance of beams as structural elements. And reading of beams details from existing drawings • Draw reinforcement details and section of beam. • Collecting concrete section and reinforcement from existing drawing of beam. • Learn how to use drawing equipment's in reinforced concrete beam drawing. 	CLO3	
6	Beams	<ul style="list-style-type: none"> • How to draw and describe the steel bars of beam section in tension and compression zone. • How to draw and describe the concrete of beam section. 	CLO3	
7	Columns	<ul style="list-style-type: none"> • Definition of columns, types of columns, importance of columns as structural elements. And reading of columns details from existing drawings • Draw reinforcement details and section of columns. • Collecting concrete section and reinforcement from existing drawing of columns. • Learn how to use drawing equipments in reinforced concrete columns drawing. • How to draw and describe the steel bars of columns section. • How to draw and describe the concrete of columns section. 	CLO4	
8	MID EXAM			
9	Slabs	<ul style="list-style-type: none"> • Definition of slabs, types of slabs, importance of slabs as structural elements. And reading of slabs details from existing drawings • Draw reinforcement details and section of 	CLO5	

Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
		slabs. <ul style="list-style-type: none"> Collecting concrete section and reinforcement from existing drawing of slabs. Learn how to use drawing equipment's in reinforced concrete slabs drawing. 		
10	Slabs	<ul style="list-style-type: none"> How to draw and describe the steel bars of slabs section in tension and compression zone. How to draw and describe the concrete of slabs section 	CLO5	
11	Walls and Foundation	<ul style="list-style-type: none"> Definition of foundations and walls, types of foundations and walls, importance of foundations and walls as structural elements. reading of foundations and walls details from existing drawings Learn how to use drawing equipment in reinforced concrete foundations and walls drawing Learn how to draw and existing concrete foundations. Learn to present and draw major elements associated with the concrete foundations and footings reinforcement. 	CLO6	
12	Walls and Foundation	<ul style="list-style-type: none"> Draw reinforcement details and section of foundations and walls. Collecting concrete section dimensions and reinforcement details from existing drawing of foundations and walls. 	CLO6	
13	The Electrical and Sanitary Engineering	<ul style="list-style-type: none"> Definition of Electrical and Sanitary networks, types of foundations and walls, importance of foundations and walls as structural elements. Reading of Electrical and Sanitary networks details from existing drawings Learn how to use drawing equipments in Electrical and Sanitary networks drawing Learn how to draw and existing Electrical and Sanitary networks 	CLO7	
14	The Electrical and Sanitary Engineering	<ul style="list-style-type: none"> Learn to present and draw major elements associated with the Electrical and Sanitary networks Draw section details from Electrical and Sanitary networks 	CLO7	



Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
		<ul style="list-style-type: none"> Collecting concrete section dimensions and reinforcement details from existing drawing of Electrical and Sanitary networks 		
15	Metal Structural Components	<ul style="list-style-type: none"> Definition Metal Structural Components, types of Metal Structural Components, importance of Metal Structural Components. Read, and understand the metal structural components in several facilities from existing drawings Learn how to draw major components related to metal structure components. Learn how to mark metal parts to distinguish from other components. 	CLO8	
16	Final Exam			

COURSE LEARNING RESOURCES

Teaching will be achieved using available resources including Lectures, data show and materials uploaded to the e-learning system and term projects.

ONLINE RESOURCES

A lot of references and learning videos and codes are available on the internet. The student could refer to them for more information.

ASSESSMANT TOOLS

ASSESSMENT TOOLS		%
Projects and Quizzes		30
Mid Exam		20
Final Exam		50
TOTAL MARKS		100

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 20% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss



this with the instructor and written proof will be required to delete any absences from his/her attendance records.

GRADING SYSTEM

Example:

Grade	points
-	

REMARKS

Use of Mobile Devices, Laptops, etc. During Class, unexpected noises and movement automatically divert and capture people's attention, which means you are affecting everyone's learning experience if your cell phone, laptop, etc. makes noise or is visually disturbing during class. For this reason, students are required to turn off their mobile devices and close their laptops during class.

Academic Integrity. Copying assignments, allowing assignments to be copied, will fail the assignment on the first offense. Cheat in tests, or copying assignments for the second time.

Cite all sources consulted to any extent (including material from the internet), whether or not assigned and whether or not quoted directly.

Project: Students will undertake a term project to study in detail one of the course topics. The project may involve a critical literature review or a case study. The students should consult at least five (5) references or journal articles. A written project report of 10 pages maximum will be submitted in nominated dates. Ten-minute presentation will be given to the rest of the class during the last two weeks of the semester.

Formats, Rules, Topics, submission and presentation dates are illustrated in project form.

COURSE COORDINATOR

Course Coordinator

Department Head:

Signature:

Signature:

Date:

Date: