COURSE PLAN

FIRST: BASIC INFORMATION

College

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

Course

Course Title	: Surveying
Course Code	:020112123
Credit Hours	: 2 (2 Theoretical, 0 Practical)
Prerequisite	

Instructor

Name	: Esra' Fawaz AlAyed
Office No.	: -
Tel (Ext)	: -
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Office Hours	: -

Class Times

Text Book

- Title: principles of surveying, Eng.Mona alfaoure , 2015, Arab society library ,Amman ,Jordan.

References

- Origins of Surveying - Eng. Razan Abu Saleh, The Arab Society Library for Publishing and Distribution 2015
- Origins of Surveying - Dr. Youssef Siam
-Practical Area / Beirut - Dar Al-Ratib, Mahmoud Rashad Mustafa

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course cover surveying methods related to 3-D location information for correct design and construction. It provides practical knowledge for determining the exact location and size of sites and structures.

COURSE OBJECTIVES

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

- Recognize the basics of surveying.
- Recognize the meaning and characteristics of the leveling.
- Recognize area/volume calculation methods and their need.
- Recognize the characteristics and usability of EDM (Electronic Distance Measurement) and Theodolite.
- Recognize the methods and usefulness of polygon and coordinate calculations.

COURSE LEARNING OUTCOMES

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

CLO1. Explain the surveying types and history
CLO2. Explain how to solve errors or mistakes in measurement
CLO3. Explain the working knowledge and skills about Levelling
CLO4. Explain how to solve problems that may arise in the field of surveying using many instruments
CLO5. Evaluate the Area shape using many methods such as length, Simson's law and coordinate
CLO6. Explain the working knowledge and skills about the volume and polygon calculated
CLO7. Explain the GNSS types and applications

COURSE SYLLABUS

Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
1	Introduction	• Definition of survey • Importance of survey • Terms in survey, systems, main angles. • History & Future	CLO1	
2	Division of Surveying	• Division of surveying • Distance & Angle • Area & Volume • Coordinate	CLO1	
3	Error & Correction	• Obstacles to measuring lengths • Area errors	CLO2	
4	Levelling	• What is Levelling • Terminology • Methods of measuring the height difference between Two points • Surface balance method, rise and fall method	CLO3	
5	Levelling	• Ensuring that the line of sight is parallel to the balancing axis • Levelling for longitudinal and cross section • Reciprocal levelling	CLO3	
6	Levelling	• levelling errors & Correction	CLO4	

Week	Topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
		• Applications		
7	Stadia surveying	• The definition of Stadia Surveying • Use of theodolite • Methods to measure • Calculation of Distance & Height • Error	CLO4	
8		**Mid-term exam**		
9	EDM	• Introduction • Electronic distance device • Principle • Total Station	CLO4	
10	Coordinates	• The concept of coordinates • The types of Coordinate systems • forward and reverse intersection	CLO5	
11	Area Calculation	• Calculating area for regular and irregular shapes	CLO5	
12	Volume Calculation	• Finding the area from coordinates. • Find the volumes	CLO6	
13	Polygon correction	• Defining deviations and their types • Measuring and correcting deviations of lines.	CLO6	
14	Polygon correction	• Forward and reverse intersection between points	CLO6	
15	GNSS	• Characteristics of GNSS • History • Applications	CLO7	
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	%	
	homework's and Quizzes	20	

	Mid Exam	30	
	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: