



Course Specification

(Bachelor)

Course Title: Site Survey

Course Code: APAR24

Program: Architectural Engineering Technology

Department: NOT AVAILABLE

College: Applied College

Institution: Umm Al-Qura University

Version: 1

Last Revision Date: Pick Revision Date.

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A. General information about the course:

1. Course Identification

1. Credit hours: (2)

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (2nd year 1st semester)

4. Course General Description:

The course describes the used units in surveying. It includes the different methods for measuring distances such as taping and Electronic Distance Measurement (EDM). It contains the different types of maps and the determination of map Scales. It includes the Leveling and its different types such as Grid leveling, Profile leveling, Cross section leveling and Contouring.

5. Pre-requirements for this course (if any):

6. Co-requisites for this course (if any):

7. Course Main Objective(s):

- To handle site-surveying instruments and develop the skill to uses basic site surveying techniques.
- To help students develop their abilities to do surveying, leveling and setting out of architectural works using both basic principles and modern engineering tools.
- To have knowledge of surveying science and its applications in the planning, design, construction and operation of civil engineering projects
- To be familiar with different types of surveying instruments, techniques and detailed procedures used for taking measurements in the field.
- To use techniques involved in collecting, processing and plotting data necessary for constructing engineering-scale maps and other engineering drawings such profile and cross-sections

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom 		





No	Mode of Instruction	Contact Hours	Percentage
	• E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	1x14
2.	Laboratory/Studio	2x14
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		42

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	demonstrate principles of surveying, units, scale and the linear measurements, Leveling, Grid leveling and contouring.	K1	Lectures Lab work	Written exam Lab work Lab exam
1.2	demonstrate methods of surveying measurements and setting out.	K1	Lectures Lab work	Written exam Lab work Lab exam
1.3	describe the surveying instruments such as tape, EDM, level, and theodolites.	K3	Lectures Lab work	Written exam Lab work Lab exam
2.0	Skills			
2.1	increase the ability to imagine the details of plane surveying and its elements	S2	Lectures Lab work	Written exam Lab work Lab exam
2.2	calculate the different corrections for measurements by different methods	S2	Lectures Lab work	Written exam Lab work Lab exam
2.3	prepare the students to do surveying by theodolites, levelling, grid levelling and contouring.		Lectures Lab work	Written exam Lab work Lab exam
2.4	To calculate and draw contours, profiles and cross sections.	S4	Lectures Lab work	Written exam Lab work Lab exam
2.5	To prepare written reports, accurate calculations and maps.		Lectures Lab work	Written exam Lab work





Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
				Lab exam
2.6	To design and conduct practical field work		Lectures Lab work	Written exam Lab work Lab exam
3.0	Values, autonomy, and responsibility			
3.1	Integrate professionally and ethically with teams to manipulate solving specific surveying problems.		Lectures Lab work	Written exam Lab work Lab exam
3.2	develop expertise required in life-long learning and to engage in continuing education of professional/engineering skills.		Lectures Lab work	Written exam Lab work Lab exam

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction and Units	3
2.	Distance measurements by tape	6
3.	Distance measurements by Electronic Distance Measurement (EDM)	3
4.	Surveying maps	3
5.	Map Scale	3
6.	Leveling	6
7.	Grid levelling	3
8.	Profile and Cross section leveling	3
9.	Contouring and Topographic Maps	6
10	Surveying using Theodolites	6
Total		42

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes	3,7	15%
2.	Midterm exam	8	15%
3.	Presentation	9	5%
4.	Practical Examination.	14	15%
5.	Final term exam	16	50%





*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Barry F. K. and Gelnnbind, S. J. "Surveying, Principles and Applications", 9th Edition. Prentice Hall, 2014. Wolf, P. R., and Ghilani, C. D. "Elementary Surveying", 14th Edition, Prentice Hall, 2015
Supportive References	
Electronic Materials	http://ocw.mit.edu/ http://www.sciencedirect.com .
Other Learning Materials	Barry F. K. and Gelnnbind, S. J. "Surveying, Principles and Applications", 9th Edition. Prentice Hall, 2014.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom for about 40 students, with white board, computer, projector and internet.
Technology equipment (projector, smart board, software)	A white board, Computer with multi-media, a printer, internet connection, data show, Microsoft Office, AUTOCAD, SURFER
Other equipment (depending on the nature of the specialty)	Printers and laptops for staff members are required.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Questioner of course quality
Effectiveness of Students assessment	Peer reviewers	Random grading report Test Completion report for test Standards
Quality of learning resources	Students	E-Survey of sufficiency of learning resources
The extent to which CLOs have been achieved	Program leaders	Results of quizzes, mid-term and final exams- Presentation and discussion.
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))





Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Umm Al-Qura University Council
REFERENCE NO.	851141114462/190372
DATE	22/11/1446 هـ

