

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Engineering Surveying -II	Module Delivery	
Module Type	Core	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	CIV007		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGII	Semester of Delivery	4
Administering Department	CV101	College	Engineering
Module Leader	Dr. Maher Shakir Mahmood	e-mail	Maher.mahmood@uoanabr.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CIV003 Engineering Surveying-I	Semester	3
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. Recognize conventional and modern methods of surveying. 2. Improve ability to transform elementary concept of surveying to field practice.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	3. Establish an ability to solve plane surveying problems by proper mathematics. 4. provide the knowledge and skill in curve ranging. 5. Learn to apply total stations and other surveying equipment to make observations. 6. Develop an understanding of the basic principles of photogrammetry, geographic information system GIS and global position system GPS.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Chapter One: AREA Methods of Measuring Area, Field measurement methods, Methods of Determining Area from Map Measurements [15 hr]. Chapter Two: Volumes Methods of Volume Measurement, The Cross-Section Method, Types of The Cross-Section, Average-End-Area Formula, Prismoidal Formula, Contour-Area Method, and Spot levels method [20 hr]. Chapter Three: Horizontal Curves Definitions, Types of Circular Curves, and Setting out of Circular Curve [15 hr]. Chapter Four: Vertical Curves Definitions, Types of Vertical Curves, and Setting out of Vertical Curve [10 hr]. Chapter Five: The Global Positioning System (GPS) Introduction, GPS Segments [5 hr]. Chapter Six: Photogrammetry Definition of Photogrammetry, Uses of Photogrammetry, Aerial Cameras, Types of Aerial Photographs, Vertical Aerial Photographs, Scale of a Vertical Photograph, and Ground Coordinates from a Vertical Photograph [10 hrs].
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Foundation engineering courses require effective learning and teaching strategies to ensure students develop a strong understanding of complex concepts and their practical applications. The range of strategies that can enhance the learning experience for students in engineering surveying courses. These strategies include

	lecture-based teaching, practical applications, problem-solving assignments, group work and discussions, technology integration, site visits, assessments and feedback, continuous learning, and encouraging self-directed learning. By incorporating these strategies, educators can create an engaging and comprehensive learning environment that equips students with the knowledge, skills, and critical thinking abilities necessary for success in the field of foundation engineering.
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	22	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	1.47
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2 hr	5% (5)	3, 6,10,14	LO #1, 2, and 4
	Assignments	2 hr	5% (5)	1, 2, ...,15	LO #1, 2, 3, and 4
	Projects / Lab.	2 hr	10% (10)		LO #3
	Report				
Summative assessment	Midterm Exam	3 hr	30% (30)	6, 12	LO #1, 2, and 4
	Final Exam	3hr	50% (50)	16	LO #1, 2, 3, and 4
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Areas
Week 2	Areas
Week 3	Areas

Week 4	Volume computations.
Week 5	Volume computations.
Week 6	Volume computations.
Week 7	Volume computations.
Week 8	Horizontal curves.
Week 9	Horizontal curves.
Week 10	Horizontal curves.
Week 11	Vertical curves
Week 12	Vertical curves
Week 13	Global Position System (GPS)
Week 14	Photogrammetry
Week 15	Photogrammetry
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1, 2	Measuring distances using total station.
Week 3, 4	Area computation using total station.
Week 5, 6	Area computation (map)
Week 7, 8, 9	Total station application.
Week 10, 11	Volume computation using total station.
Week 12, 13	Laying out of circular curve by deflection angles method.
Week 14	GPS applications.

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Charles D. Ghilani, Paul R. Wolf, Elementary Surveying, Prentice Hall, 12th ed., 2008.	Yes

Recommended Texts	Chandra, A. M. Surveying Problem Solution with Theory and Objective Type Questions. New Age International, 2005.	Yes
Websites	https://www.uoanbar.edu.iq/Bank-Section.php	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
<p>Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>				