

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Engineering Surveying-I	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	CIV003		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGII		
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	Dr. Hameed Aswad	e-mail	hameedaswad@uoanbar.edu.iq
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	ENG004 Calculus-II	Semester	2
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims</p> <p>أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 1. Have the ability to use knowledge of mathematics, science and engineering to recognize the measurement techniques and tools used in land surveying. 2. To enable students to realize theory and practice of plane surveying. 3. To enable students in interpretation and preparing surveying maps. 4. To develop skills to apply modern survey tools.
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. Develop an ability to solve surveying problems utilizing fundamental principles of Science and Engineering; 2. Expose students to the latest computational and measurement tools. This will be done as individuals and as members of student field survey teams; 3. Students will learn to use equipment similar in type and quality to those professional surveyors use in their businesses; 4. Exhibit an understanding of the role of engineering surveyors in the civil and environmental engineering profession.
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p><u>Chapter One: Basic Principle of Surveying</u> Definition of Surveying, Types of Surveys, History of Surveying, Specialized Types of Surveys, The Role of Surveyors in Civil Engineering Practice, Basic Measurements and Instruments, Units of Measurement and scales, Theory of Errors, Error Sources and types [5 hr].</p> <p><u>Chapter Two: Distance Measurements Using Tape</u> CHAIN Surveying, Equipment Used in Chain Surveying, Corrections to Linear Measurement and their Application [10 hr].</p> <p><u>Chapter Three: Leveling—Theory and Methods</u> General Definitions, Methods of Levelling, Levelling Equipment, Testing and Adjusting Levels, Leveling Mistakes and Errors, Loop Closure and Its Apportioning, Profile Leveling, Grid, Cross-Section, or Borrow-Pit Leveling [15 hr].</p> <p><u>Chapter Four: Distance Measurements Using Trigonometric & EDM</u> Tacheometric Or Optical Method, Stadia, Electronic Distance Measurement [10 hr].</p> <p><u>Chapter Five: Angles, Azimuth, and Bearing</u> Angle Measurement, Types of Measured Angles, Direction of a Line, Bearings and Azimuths, Methods of Measuring Angles [15 hr].</p>

	<p>Chapter Six: Traversing</p> <p>Definition of a traverse, Observation of Traverse Angles or Directions, Angle Misclosure, Sources of Error in Traversing, Balancing Angles, Departures and Latitudes, Traverse Adjustment, Coordinates, Alternative Methods for Making Traverse Computations, Inversing, Computing Final Adjusted Traverse Lengths and Directions [20 hrs].</p>
<p>Learning and Teaching Strategies</p> <p>استراتيجيات التعلم والتعليم</p>	
Strategies	<p>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.</p>

<p>Student Workload (SWL)</p> <p>الحمل الدراسي للطالب</p>					
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			
<p>Module Evaluation</p> <p>تقييم المادة الدراسية</p>					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1 hr	5% (5)	3, 6,10,14	LO #1, 2, 3, and 4
	Assignments	2 hr	5% (5)	1, 2, ...,15	LO #1, 2, 3, and 4
	Projects / Lab.	2 hr	10% (10)		LO #1, 2, and 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	Basic Principle of Surveying
Week 2	Distance Measurements Using Tape
Week 3	Distance Measurements Using Tape
Week 4	Leveling—Theory and Methods
Week 5	Leveling—Theory and Methods
Week 6	Leveling—Theory and Methods
Week 7	Distance Measurements Using Trigonometric & EDM
Week 8	Distance Measurements Using Trigonometric & EDM
Week 9	Angles, Azimuth, and Bearing
Week 10	Angles, Azimuth, and Bearing
Week 11	Angles, Azimuth, and Bearing
Week 12	Traversing
Week 13	Traversing
Week 14	Traversing
Week 15	Traversing
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1, 2, 3	Measuring distances using pacing and conventional taping
Week 4, 5	leveling with an autolevel and high rod
Week 6, 7	profile leveling
Week 8, 9, 10	Measuring angles
Week 11, 12, 13, 14	total station

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

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.