

Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Authority
Department of Quality Assurance and Academic Accreditation

Academic Program Description Form for Colleges and Institutes Academic Year

University: Shatt Al-Arab
College/Institute: Engineering
Scientific Department: Civil
Date of Form Completion: 01/09/2025



Signature

Name of Head of Department:

Asst. Lecturer Nabeel Najm Abdullah



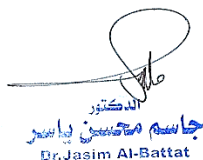
Signature

Name of Scientific Assistant

Dr. Jawad Kadhim

Reviewed by:
Quality Assurance and University Performance Division
Name of Division Director: Dr. Jasem Mohsen Yasser

Signature:



الدكتور
جاسم محمد باقر
Dr. Jasim Al-Battat



أ.م.د. احسان قاسم محمد
عميد كلية الهندسة

Dean's Approval

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Foundation engineering II		Module Delivery
Module Type	Core		☐ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	CE412		
ECTS Credits	10		
SWL (hr/sem)	250		
Module Level	4	Semester of Delivery	2
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Dr. Jasim Al-Battat		e-mail
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	1/09/2025	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Soil Mechanics Concrete Design	Semester	
Co-requisites module	None	Semester	

uobasrah

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	This course is intended to; 1. Determine the allowable axial load capacity of single piles and pile groups. 2. Determine the settlement of single pile and pile groups. 3. Understand and determine lateral earth pressure. 4. Understand the forces that lead to instability of earth retaining structures. 5. Determine the stability of earth retaining structures (retaining walls, sheet pile walls, braced excavation).
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	When the student complete studying this course, he should be able to: 1. Determine the allowable axial load capacity of single pile and pile group. 2. Estimation of pile load in a pile group. 3. Determine the stability of earth structures.
Indicative Contents المحتويات الإرشادية	• Chapter 1; Pile Foundations: Single Pile Analysis; Introduction, Classification of Piles, Static Pile Capacity, Point Bearing Capacity, Point Bearing from Field Tests, SPT, CPT, Skin Friction Capacity, Pile Loading Test-Axial Compression (ASTM-D1143), Pile Capacity – Dynamic Analysis

	• Chapter 2; Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction • Chapter 3; Lateral Earth Pressure; Introduction, Coulomb Earth Pressure Theory, Rankine Earth Pressures • Chapter 4; Retaining Walls; Introduction, Stability of Retaining Walls, Base Key. • Chapter 5; Sheet Pile Walls; Introduction, Types of sheetpiling, Safety Factor, Cantilever Sheetpiling, Anchored Sheetpiling: Free-Earth Support, Capacity of Deadman, Location of Deadman.
--	---

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	I view teaching as a process of encouraging students to make connections between their own experience and to foster critical thinking skills and problem-solving. I am more concerned with the student's understanding of fundamental course concepts and their ability to apply them in new problem-solving situations. Exams should be

	designed to bring together different concepts from individual examples and homework problems and combine them. My intent in developing exam questions is not to evaluate whether a student can solve a given problem, but to determine whether they understand and can apply the concepts required to solve this problem. After all, the chance that they will face the exact problem in practice is negligible, but the interaction of concepts to solve new problem is vital. As a result, students work is graded with respect to the process used in solving the problem rather than the final answer they will get. A professor should be sensitive to the background and preparation of the students. The way the students are treated has a great influence on the student's performance. I strive to demonstrate to each student my respect for them as individuals and for their contributions to the learning process. Thus, I try to learn every student's name and maintain a high level of classroom interaction. The class atmosphere is very relaxed, so students feel comfortable contributing and asking questions. To further facilitate students learning, I like to provide opportunities for reflection and feedback from students via after-class and office discussions, peer-to-peer feedback on assignments and learning activities and formal and informal evaluations. Students' responses and inputs are very helpful for improving my teaching skills.
--	---

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ 15 اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	142	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	10
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	108	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	250		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3 , 7	All
	Assignments	2	10% (10)	2,4,6,8,10,12	All
	Class activity	1	10% (10)		
	Report	1	10% (10)		
Summative assessment	Midterm Exam	1 hr	10% (10)	10	1-5
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Chapter 1; Pile Foundations: Single Pile Analysis; Introduction, Classification of Piles, Static Pile Capacity, Point Bearing Capacity, Point Bearing from Field Tests, SPT, CPT,
Week 2	Pile Foundations: Single Pile Analysis; Introduction, Classification of Piles, Static Pile Capacity, Point Bearing Capacity, Point Bearing from Field Tests, SPT, CPT,
Week 3	Pile Foundations: Single Pile Analysis; Introduction, Classification of Piles, Static Pile Capacity, Point Bearing Capacity, Point Bearing from Field Tests, SPT, CPT,
Week 4	Skin Friction Capacity, Pile Loading Test-Axial Compression (ASTM-D1143), Pile Capacity – Dynamic Analysis
Week 5	Skin Friction Capacity, Pile Loading Test-Axial Compression (ASTM-D1143), Pile Capacity – Dynamic Analysis
Week 6	Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction
Week 7	Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction
Week 8	Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction
Week 9	Lateral Earth Pressure; Introduction, Coulomb Earth Pressure Theory, Rankine Earth Pressures
Week 10	Lateral Earth Pressure; Introduction, Coulomb Earth Pressure Theory, Rankine Earth Pressures

Week 11	Retaining Walls; Introduction, Stability of Retaining Walls, Base Key.
Week 12	Sheet Pile Walls; Introduction, Types of sheetpiling, Safety Factor, Cantilever Sheetpiling,
Week 13	Sheet Pile Walls; Introduction, Types of sheetpiling, Safety Factor, Cantilever Sheetpiling,
Week 14	Anchored Sheetpiling: Free-Earth Support, Capacity of Deadman, Location of Deadman.
Week 15	Anchored Sheetpiling: Free-Earth Support, Capacity of Deadman, Location of Deadman.
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Foundation Analysis and Design By; Joseph E. Bowles	Yes
Recommended Texts	Principles of Foundation Engineering – Ninth Edition By; Braja M. Das and Nagaratnam Sivakugan	No
Websites		

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.				

