



Jordan University of Science and Technology
Faculty of Engineering
Civil Engineering Department

CE464 Foundation Engineering - JNQF Level: 7

First Semester 2024-2025

Course Catalog

3 Credit Hours. Composition and structure of soils, Phase relations and index properties, soil classification, soil compaction, principle of effective stress, stresses due to self-weight, stresses due to applied loads, soil permeability, seepage: one and two dimensional, flow net, consolidation theory and consolidation settlement analysis: immediate and consolidation settlement, secondary compression, shear strength of soils.?

Teaching Method: Blended

Text Book

Title	Principles of Foundation Engineering
Author(s)	Das, B.M.
Edition	8th Edition
Short Name	1
Other Information	

Instructor

Name	Dr. Samer Rababah
Office Location	C2 L-1
Office Hours	Sun : 08:30 - 10:00 Mon : 10:00 - 11:30 Mon : 13:00 - 14:00 Tue : 08:30 - 10:00 Wed : 10:00 - 11:30
Email	srrabah@just.edu.jo

Class Schedule & Room

Section 2:

Lecture Time: Mon, Wed : 10:00 - 11:30

Room: CH2106

Prerequisites

Line Number	Course Name	Prerequisite Type
234321	CE432 Reinforced Concrete (1)	Pre./Con.
234631	CE463 Geotechnical Engineering Lab	Prerequisite / Study
234620	CE462 Geotechnical Engineering	Prerequisite / Pass

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Geotechnical Properties of Soil	From 1
Weeks 2, 3	Subsurface Exploration	From 1
Weeks 4, 5, 6	3. Shallow Foundations: UBC	From 1
Weeks 6, 7	Shallow Foundations: Settlement	From 1
Weeks 8, 9, 10	Mat Foundations	From 1
Weeks 11, 12	Lateral Earth pressure	From 1
Weeks 13, 14, 15	Retaining Walls	From 1
Week 16	EXAMS	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes

	Course Outcome Weight (Out of 100%)	Assessment method
To be able to identify between the different types of foundations and the factors governing the choice of the most suitable type of foundation for a given situation. [1PI-2a] [1L7K1, 1L7S1]	30%	
To be able to apply engineering design principal in determining (a) bearing capacity estimation, (b) settlement analysis, and the design of diverse footing types, incorporating considerations for safety and economic factors. [1PI-2a] [1L7S1]	40%	
To be able to apply engineering design principal in calculating lateral earth pressure and design of retaining wall structures [1PI-2a] [1L7K1, 1L7S1]	30%	Final Exam

Relationship to Program Student Outcomes (Out of 100%)

PI-1a	PI-2a	PI-2b	PI-2c	PI-2d	PI-3a	PI-4a	PI-4b	PI-5a	PI-6a	PI-6b	PI-7a
	100										

Relationship to NQF Outcomes (Out of 100%)	
L7K1	L7S1
30	70

Evaluation	
Assessment Tool	Weight
Final Exam	40%

Policy	
absence	absence

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