



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

CE464 Foundation Engineering (1)

Summer Semester 2019-2020

**Course Catalog**

3 Credit Hours. Review of basic soil mechanics, types of shallow foundations, bearing capacity of foundations: equations and correlations, settlement, design of isolated footings, special types of footings, rectangular combined and strap footings, lateral earth pressure and retaining walls.

**Text Book**

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

**Instructor**

<b>Name</b>	<b>Prof. Osama Nusier</b>
<b>Office Location</b>	C2L2
<b>Office Hours</b>	
<b>Email</b>	nosama@just.edu.jo

**Class Schedule & Room**

Section 2:  
Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00  
Room: منصة الكترونية

**Tentative List of Topics Covered**

<b>Weeks</b>	<b>Topic</b>	<b>References</b>
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Week 1	1. Geotechnical Properties of Soil	From 1
Week 2	2. Subsurface Exploration	<b>Chap. 3.11-3.15, 3.20,3.21</b> From 1
Weeks 3, 4	3. Shallow Foundations: UBC	<b>Chap. 4.1-4.6, 4.9- 4.13</b> From 1
Week 5	4. Vertical Stress Increase in Soil	<b>Chap 6.1-6.8,</b> From 1
Weeks 6, 7	5. Shallow Foundations: Settlement	<b>Chap. 7.1-7.6, 7.9, 7.11-7.14</b> From 1
Weeks 8, 9	6. Mat Foundations	<b>Chap. 8</b> From 1
Weeks 11, 12	7. Lateral Earth pressure	<b>Chap.12.1-12.7, 12.10-12.13</b> From 1
Weeks 14, 15, 16	8. Retaining Walls	<b>Chap. 13.1-13.9</b> From 1

<b>Mapping of Course Outcomes to Program Student Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Provide the student with an opportunity to combine the knowledge gained in Soil mechanics I and soil mechanics Laboratory and apply the principles learned in the above courses in Foundation Design. [1SLO1]	10%	
Introduce to the student the principal types of foundations and the factors governing the choice of the most suitable type of foundation for a given situation. [1SLO2]	10%	
Familiarize the student with the procedures used for: (a) bearing capacity estimation, (b) settlement analysis and design of various types of footings. [1SLO1, 1SLO2]	40%	
Familiarize the students with the procedures used for calculating lateral earth pressure and design of retaining wall structures. [1SLO1, 1SLO2]	40%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>						
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
50	50					

<b>Evaluation</b>	
<b>Assessment Tool</b>	<b>Weight</b>
first Exam	25%
Second Exam	25%
Final	40%

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