Faculty of Engineering & Technology

Foundations for Architects

Information :

Course Code :	SCM 442	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Architectural Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Ahmed Mohamed Abdel Moniem Mohamed Soliman	

Area Of Study :

Increase knowledge for Architects on the principles of soil mechanics and foundation engineering art and its disciplineces.

Description :

Soil characteristics and mechanics, Selection and design of foundations, Soil properties, Soil classification, Soil compaction, Stresses in soil, Soil compressibility, Theory of consolidation, Lateral earth pressure, Design of shallow foundations, Pile foundations, Retaining walls, Site investigations and selection of suitable foundations.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Demonstrate knowledge and understanding of the basics of information and communication technology (ICT).
2 -	Identify different building construction and execution design methods and techniques.
3 -	Understand basic applied and engineering science.
b.Intellectual Skills: :	
1 -	Analyze the solution alternatives and choose the optimum one.
c.Professional and Practical Skills: :	
1 -	Design virtual presentations and Write technical reports.
d.General and Transferable Skills: :	
1 -	Deal with others according to the rules of the professional ethics.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Soil Characteristics and Mechanics	4	2	2
Preliminarily Definitions and Relationships	4	2	2
Soil Properties and Classifications	8	4	4
Stress in Soil and Compressibility	4	2	2

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Theory of Consolidation and Settlement	4	2	2
Shear Strength and Compaction	4	2	2
Lateral Earth Pressure and Retaining Walls	4	2	2
Site Investigation and Selection of Foundation	4	2	2
Bearing Capacity Requirements for Foundation Design	4	2	2
Design of Shallow Foundations. (Isolated Square Footing)	4	2	2
Design of Deep Foundations. (Pile Foundation)	4	2	2
Revision	4	2	2

Teaching And Learning Methodologies :

Lectures.

Assignments.

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment (1).	15.00		
Assignment (2).	10.00		
Attendance.	5.00		
Final Exam.	40.00		
In Class Work.	10.00		
Midterm Exam.	15.00		
Participation.	5.00		

Course Notes :

Course notes are required.

Recommended books :

ÅDas, B.M., (1998) ñPrinciples of Geotechnical EngineeringòPWS Publishing Company, Boston, MA 02116-4324.
ÅDas, B.M., (1998) ñPrinciples of Foundation EngineeringòCole Publishing Company, Pacific Grove, CA 93950.
ÅEgypt Geotechnical Code of Practice (2001), Building Research Institute.

Periodicals :

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Web Sites :

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