COURSE PLAN

FIRST: BASIC INFORMATION

College	
College	: Faculty of Karak - Balqa Applied University
Department	: Department Of Basic and Information Science

Course	
Course Title	: Soil Mechanics
Course Code	: 020112237
Credit Hours	: 3 (1 Theoretical, 2 Practical)
Prerequisite	: 020112182

Instructor	
Name	: Aya Qatawna
Office No.	: 2
Tel (Ext)	:
E-mail	: Aya.qatawneh@bau.edu.jo
Office Hours	:

Class Times

Text Book

- Title: Soil Mechanics - Eng. Mona Al-Fauri, The Arab Society Library for Publishing and Distribution, 2015.

References

- Soil Mechanics - Eng. Mona Al-Fauri, The Arab Society Library for Publishing and Distribution, 2015.
- Site Survey Code, Ministry of Public Works, Amman, 1998.
- Code of Supporting Bases and Walls, Ministry of Public Works, Amman, 1998.
- Soil Mechanics - Dr. Muhammad Marwan Hamza.
- Principals of Soil Mechanics and Foundation by VNS Murthy, 2001.
- Soil Mechanics and Foundation by Dr.B.C.Punamia, 1994

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course cover working knowledge of physical properties of soil. For this, it covers atterberg limits, soil classification, stresses & shear strength of soil, permeability & settlements, lateral earth pressure and retaining structure, soil compaction, bearing capacity.

COURSE OBJECTIVES

The objective of this course is to enable the student to do the following:

- Express the physical properties of the soil
- Express the properties of the soil and their impact on pressure and different forces
- Calculate the bearing capacity of the soil
- Apply the simple mathematics to derive relationships among soil properties.

COURSE LEARNING OUTCOMES

On successful completion of this course, students are expected to be able to:

CLO1. Express the origin of the soil and geological cycle
CLO2. Apply principles of phase diagram for soil properties and perform basic weight- volume calculations
CLO3. Recognize consistency of soil - Atterberg limits
CLO4. Apply AASHTO method to soil classification
CLO5. Apply Unified Soil Classification System to soil classification
CLO6. Recognize basics principles of flow and soil permeability
CLO7. Recognize how stresses are transferred through soils and compute both geostatic, and induced stresses due to point, line, and area loads
CLO8. Recognize the basic concept of the ultimate bearing capacity of shallow foundations

COURSE SYLLABUS

Week	topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
1	Introduction	• What is the soil? • Cohesive and non-cohesive soil	CLO.1	
2	Types of Soil	• Organic soil • Rocks • Sieve analysis test	CLO.2	
3	Soil Properties	• The relationship between specific weight and moisture content	CLO.2	
4	Soil Properties	• Physical properties • Moisture content test	CLO.2	
5	Soil Properties	• Physical properties • Unit wright of the soil test	CLO.2	
6	Soil Properties	• Atterberg limits • Atterberg limit test	CLO.3	
7	Soil Classifications	• Soil classification according to AASHTO method	CLO.4	
8		**MID EXAM**		
9	Soil Classifications	• Unified soil classification system	CLO.5	

Week	topic	Topic details	Related LO and Reference (Chapter)	Proposed assignments
10	Soil Classifications	• Casagrande classification	CLO.5	
11	Permeability Soil	• What is the permeability • Coefficient of permeability	CLO.6	
12	Permeability Soil	• Permeability experiment	CLO.6	
13	Shear Force of the Soil	• Explanation of shear in the soil • Hooke's law	CLO.7	
14	Settlement	• Settlement in soil • Types of soil settlement	CLO.8	
15	Settlement	• Factors affecting settlement • California bearing ratio test	CLO.8	
16	**FINAL EXAM**			

COURSE LEARNING RESOURCES

The effectiveness of teaching in this course depends on making students familiar with the photographic process through direct practice of photography and dealing with a digital photographic camera, the use of light and its effects in creating scenes, modifying them according to the required technical specifications and using them in digital or print advertisements, and producing graphic projects based on Photography, and the use of images in advertising campaigns.

Teaching methods:

- Problem-solving skills: by employing the photographic image in situations that require a visual impact to solve some visual overlaps in graphic works.
- Exercising and practicing: by training students to take a photograph through the ability to adjust the camera's settings manually, and to produce artistic images with all its elements.
- Online research skills on topics related to course objectives and recent developments in the field of photography.

Learning skills and adaptability: Developed by transferring students and reconfiguring work teams to enable them to adapt to other individuals from time to time.

ONLINE RESOURCES

https://easyengineering.net/geotechnical-engineering-by-v-n-s-murthy/
https://civildatas.com/download/soil-mechanics-and-foundations-by-punmia

ASSESSMANT TOOLS

Assessment Tools	%
Projects and Quizzes	20%
MID Exam	30%

	Final Exam	50%	
	Total Marks	100%	

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 20% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

GRADING SYSTEM

Example:

Average	Maximum	Minimum
Excellent	100%	90%
Very Good	89%	80%
Good	79%	70%
Satisfactory	69%	60%
Weak	59%	50%
Failed	49%	35%

REMARKS

{The instructor can add any comments and directives such as the attendance policy and topics related to ethics}

COURSE COORDINATOR

Course Coordinator :Aya Qatawna **Department Head:**

Signature: **Signature:**

Date: **Date:**