



## Course Weekly Outline

<b>Course Instructor</b>	Luay Dawood Farhan				
<b>E_mail</b>	<a href="mailto:raadaltamimi@uodiyala.edu.iq">raadaltamimi@uodiyala.edu.iq</a>				
<b>Title</b>	Principles of soil				
<b>Course Number</b>					
<b>Credits: Lectures Hours: Practical Hours:</b>					
<b>Course Objective</b>	Geological science				
<b>Course Description</b>	The student should know formation and process in soil, physical, chemical and biochemistry				
<b>Prequests</b>					
<b>Textbook References</b>	Alani, 1988. Principles of soil				
<b>Course Assessment</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As (30%)		As (10%)	----	As (60%)
<b>General Notes</b>					

## Course weekly Outline

week	Date	Topics Covered	Practical Part
1		Soil formation and formation	How to take soil samples
2		Soil formation processes and factors	Preparation of samples for laboratory study
3		<b>Soil profile</b>	Determination of moisture in the soil
4		Soil physical properties( psp) texture, classes, structure,	<b>Distribution (soil texture)</b>
5		Soil density, Bulk density , soil air , soil temperature , soil color	Distribution volumetric minutes of soil (mechanical analysis)
6		Available water capacity , permeability soil water.	Determination density and bulk soil
7		<b>Soil water (soil water classification)</b>	<b>How to prepare saturated soil paste and calculate saturation</b>
8		Soil Chemical Properties	Measurement of electrical conductivity
9		Soil minerals	Measure PH in soil
10		Colloids and soil properties	
11		Double electrical layer	Determination of positive ions from soil and water extract
12		Exchanges ion in the soil	Determination of negative ions from soil and water extract
13		The properties of bio-soil (soil classification revival)	Estimate calcium carbonate
14		The role of biology in the soil to increase soil fertility	Estimation of organic matter
15		Soil classification	Estimation of soil biology

Instructor Signature:

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