College:Engineering Department:Civil Engineering

Course Title: ***Soil laboratory***

Course No: 0901417

Credit Hours: 1

Semester:1

About The Course

Course Title: ***Soil laboratory*** Class:
Course No: 0901417 Lecture Room: 301

Obligatory/ Optional:
Text Book: Geotechnical engineering

The Instructor

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Course Description

Use soil testing methods to determine the physical characteristics of different soil types. Laboratory experiments include: granular gradient of soil (by sieves of coarse-grained soil and by hydrometer of soft soil) Atterberg limits (liquidity limit, plasticity limit, shrinkage limit). Compaction, water flow within the soil (constant and variable pressure), soil compression, soil swelling and swelling pressure, direct shear, unconfined compression test , triaxial shear test, the course emphasizes the analysis and study of laboratory results and the writing of specialized technical reports

Course Objectives

Use soil testing methods to determine the physical characteristics of different soil types.

Learning Outcome

the course emphasizes the analysis and study of laboratory results and the writing of specialized technical reports

Making students aware of how language works to convey meaning as its basic function

Course Outline and Time schedule

Week	Topic	Chapter Reading Assignments
1/13	water content	Experimental 1
2/13	Atterberg limits	Experimental 2
3/13	grain size analysis	Experimental 3
4/13	hydrometer test	Experimental 4
5/13	specific gravity	Experimental 5
6/13	compaction test	Experimental 6
7/13	**Mid Exam**	
8/13	permeability test	Experimental 7
9/13	direct shear test	Experimental 8
10/13	triaxial shear test	Experimental 9
11/13	unconfined compression test	Experimental 10
12/13	consolidation test	Experimental 11
13/13	**Final Exam**	

Presentation methods and techniques

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

1- Lecturing with active participations.
2- Problem solving.
3- Cooperative learning.
4- Discussion.
5- Learning by activities.
6- Connecting students with different sources of information

Sources of information and Instructional Aids

For example: … power point , videos lecture .

- Transparencies
- Distance learning
- Library sources

Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated
Through: feed back and the skills that are acquired by the students

The tools:
1- Digonistic tests to identify the students level and areas of weakness
2- Formal (stage) evaluation
   a) Class Participation 20%
   b) Ist Exam 20%
   c) 2nd Exam 20%
   d) Final Exam 40%

Tool & Evaluation

Tests are permanent tools & assessment, in addition to the activity file which contains curricular and the co-cussiculor activities, research, report papers and the active participation of the student in the lecture.

The following table clarifies the organization of the assessment schedule:

Test	Date	Grade
First Exam	28/3/2019	20
2nd Exam	28/4/2019	20
Activities &	Students should be notified about	20

Participation	their marks	
Final Exam	Not yet	40

Activities and Instructional Assignment

1- Practical assignments to achieve the syllabus objectives.

2- ……..

Regulations to maintain the teaching-Learning Process in the Lecture:

1- Regular attendance.

2- Respect of commencement and ending of the lecture time.

3- Positive relationship between student and teacher.

4- Commitment to present assignments on time.

5- High commitment during the lecture to avoid any kind of disturbance and distortion.

6- High seuse of trust and sincerity when referring to any piece of information and to mention the source.

7- The student who absents himself should submit an accepted excuse.

8- University relevant regulations should be applied in case the studen,s behavior is not accepted.

9- Allowed Absence percentages is (%).

References :

1. Principle of geotechnical engineering by Braja M das