

Course Syllabus

SOIL MECHANICS

Printed by: jcedeno

Program: Oceanographic Engineering

1. Course number and name

CIVG1014 - SOIL MECHANICS

2. Credits and contact hours

3 credits and 4 contact hours

3. Instructor's course or coordinator's name

JHONNY RICHARD ENCALADA GUACHUN

4. Text book, tittle, author, and year

- Lambe, T. William. Mecanica de suelos (Spanish Edition) (1era Edición)
 - a. Other supplemental materials
- Peck, R., Hanson, W., Thornburn, T.. "Ingeniería de Cimentaciones" ((2008))

5. Specific course information

- a. Brief description of the content of the course (catalog description)

Brief on the course content (catalog description)

The soil Mechanics course aims at studying the behavior of the soil to be used as construction material or for foundations of Civil Engineering structures. This course englobes the different types of in-field sampling, the characteristics of soils, volumetric relations, the properties of soils, its classification as well as their permeability, the capillarity, compressibility, soil settlement, expansion, compaction, and CBR.

Pre requirements or co-requirements:

Pre requirements:

CIVG1001 Materiales de Construcción



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This course is: Compulsory

b. This course is: Required

6. Specific goals for the course

a. Specific outcomes of instruction

1.- Determine the index properties of soils for the analysis of the interactions between the phases of the porous medium.

2.- Analyze the soil compressibility for the computation of soil settlement and consolidation.

3.- Conduct laboratory testing for the estimation of the geotechnical parameters of the soil.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

- An ability to design and conduct experiments, as well as to analyze and interpret data related to civil engineering.

7. Brief list of topics to be covered

1.- Introduction to Soil Mechanics

2.- Soil compaction

3.- Permeability and seepage

4.- Stresses in soil masses and compressibility

5.- Shear Stress in soils

6.- Earth pressure

7.- Introduction to slope stability

