ABET course syllabus

0931232 Geotechnical Engineering Lab

1. Course number and name

0931232 Geotechnical Engineering Lab

2. Credits and contact hours

1 Credit hours

3. Course Instructor's name Wassel Bodour Bashar Tarawneh

Coordinator's name Bashar Tarawneh

4. Text book, title, author, and year

"Soil Mechanics Laboratory Manual", Braja M. Das,8th Edition or latest, SI Edition, , 2014, Cengage Learning ,Stamford, CT 06902, USA

a. other supplemental materials

Course notes

5. Specific course information

a. brief description of the content of the course

Phase relationships. Physical properties of soil. Soil classification. Permeability and seepage. Shear strength. Compressibility, consolidation and settlement.

b. prerequisites or co-requisites

Prerequisite Strength of Materials 0901242

c. indicate whether a required, elective, or selected elective course in the program

Required

6. Specific goals for the course

a. specific outcomes of instruction

To introduce the student to the principal laboratory testing methods for identifying the physical

Student will be able to classify soils

Student will be able to comprehend soil consistency

Student will be able to determine soil permeability

Student will be able to apply the time-dependent deformation concept

Interpretation of soil shear strength

b. Course addresses ABET Student Outcome(s): b,g

7. Brief list of topics to be covered

- Water content determination
- Specific Gravity of Solids
- Particle Size Analysis/ Mechanical Method
- Particle Size Analysis/ Hydrometer
- Atterberg Limits
- Soil Compaction
- Determination of in-place soil density
- Coefficient of permeability
- Consolidation test
- Direct Shear Test
- Unconfined compression test
- Triaxial Test