
Syllabus**CSU Sacramento****CE 171A: Soil Mechanics****Fall 2015**

Lecture: Tuesdays and Thursdays, 1:30 – 2:45 PM
Riverside 1012
Laboratory: Tuesdays or Thursdays, 3:00 – 5:50 PM
1118B Santa Clara Hall
Course website: <http://sacct.csus.edu>

Instructor:

Richard Armstrong, Ph.D., P.E.
Office: 4046 Riverside Hall
Office hours: Tuesdays and Wednesdays, 9:30 – 11:00 AM
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Website: <http://www.csus.edu/faculty/A/richard.armstrong/>

Textbook:

Aryani, C. (2014) Geotechnical Engineering – Applied Soil Mechanics and Foundation Engineering – Volume 1, (available in CSUS bookstore)

Prerequisites: ENGR 112 (Mechanics of Materials), CE 100 (Engineering Geology), and CE 146 (Civil Engineering Practice), with grades of C- or better; CE 146 may be taken concurrently.

Course Description:

Composition and properties of soils; soil classification; soil compaction; soil-water interaction, including permeability and seepage analyses; soil stresses; soil compressibility, including consolidation and settlement analysis; soil shear strength.

Grading:

Grades will be weighted as follows:

Problem Sets	10%
Laboratory Participation and Reports	20%
Class Participation and Attendance	5%
Midterm Exam 1	15%
Midterm Exam 2	15%
Final Exam	35%

Grades will be based upon the standard percentages.

Problem Set Details:

Problem sets must be prepared professionally – see “Grading Problem Sets.” The due date specified on the problem sets must be met. Late assignments will not be accepted without a compelling reason. Students can work in groups to share and discuss ideas and processes but must do the actual work individually.

Problem Set 1: 2-7, 2-9, 2-12, 2-15, 2-16

Problem Set 2: 2-19, 2-22, 2-23, 3-3, 3-4

Problem Set 3: 4-4, 4-6, 4-8, 4-12

Problem Set 4: 4-19, 4-24, 4-25

Problem Set 5: 5-1, 5-2, 5-3, 5-4, 5-5

Problem Set 6: 5-6, 5-7, 5-10, 5-11, 5-12

Problem Set 7: 6-9, 6-11, 6-14, 6-15, 6-19

Problem Set 8: 7-3, 7-4, 7-6, 7-8, 7-10, 7-12

Laboratory Participation and Reports:

The laboratory tests involve collecting, analyzing, and interpreting data. Students will work with others in small groups. Laboratory reports will be prepared by groups of only two students. Attendance of each laboratory session is required. Any absence or switching of lab sections must be approved by the instructor in advance. Students are required to prepare eight reports according to the report format provided and discussed in the lab. Incomplete experiments will receive an incomplete grade for the entire course (provided that everything else is satisfactorily completed).

Examination Details:

Exams will involve a combination of conceptual and computation problems. Only the assigned textbook listed above is allowed; all other information is prohibited.

Tentative Coverage:

Topic	Suggested Reading
Natural Soil Deposits	• Chapter 1
Soil Composition and Properties	• Chapter 2
Soil Compaction	• Chapter 3
Midterm 1	
Soil Water	• Chapter 4
Soil Stresses	• Chapter 5
Soil Compressibility and Settlement	• Chapter 6
Midterm 2	
Shear Strength of Soil	• Chapter 7
Final	

Course Policies:

Course Preparation – Students are expected to complete the readings of assigned materials prior to each lecture and laboratory session.

Academic Dishonesty – Any instance of academic dishonesty will result in a grade of “F” for the course and all other sanctions as applicable by the current University policy. Academic dishonesty includes, but is not limited to, copying another student’s work.

Add/Drop – The add/drop policies are the same as those outlined for the Fall 2015 schedule.

Class Disturbance – Professional behavior is required of all class participants during all aspects of the course. Coming to class late is a form of class disturbance. Chitchatting disturbs the class, too. It is unprofessional to eat food in class.

Disability Access – If you have a disability and require accommodations, please provide disability documentation to SSWD, 1008 Lassen Hall, (916) 278-6955. Please discuss your accommodation needs with me during the first week of the semester.

Grading Problem Sets:

The habits you form as an engineering student will follow you in practice. For this reason, strive to develop good habits of producing neat, legible, and accurate calculations. Remember that your associates in practice and your future clients may review your calculations and notes, and thus form an impression of your qualifications based on your presentations. Always make your work complete by using clear sketches. Use a straightedge, compass, Excel, or other engineering tools to plot. Try to keep your sketches reasonably close to true scale. Place plenty of information on your sketches, as it will prove useful. Use engineering paper and only one side of the paper. Finally, record your final results to no more than three significant figures after the decimal point.

The following ground rules will apply in the grading of problem sets for this course. Points will be deducted for each of the following items:

1. Not using engineering paper.
2. No sketches where sketches are necessary or desirable.
3. No units where units are applicable.
4. No rounding off of final answers to an appropriate number of significant figures and no underlining of final answers.
5. Not numbering each page and each problem.
6. Not stapling each problem set.