

Fall 2018

CE 641-101: Engineering Properties of Soils

Ivan Guzman

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CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENT

CE 641 – ENGINEERING PROPERTIES OF SOILS

Section: 101

Fall 2018

TENTATIVE COURSE OUTLINE

Required Text: Holtz, Kovacs, and Sheahan, Introduction to Geotechnical Engineering, 2nd Edition, Pearson, ISBN: 9780132496346

Recommended Text: Mitchell and Soga, Fundamentals of Soil Behavior, 3rd edition, Wiley ISBN: 9780471463027

Prerequisites: Completed at least one undergraduate course in soil mechanics for civil engineers within the last five years

Instructor: Ivan L. Guzman, PhD, MBA, PE
Email: iguzman@citytech.cuny.edu
Office Hours – By Appointment

Course Objectives: By the end of the semester you can expect to be able to do the following: Select and conduct appropriate laboratory and field methods for determining strength and settlement parameters for coarse grained and fine grained soils. Estimate soil strength and settlement parameters based on laboratory and field tests. Have a thorough understanding of the shear strength and settlement response of soils.

Topics:

Week	Topics	Ref. Holtz	Ref. Mitchell
1	Soil Formation and Soil Mineralogy	3	
2	Soil Composition and Soil Fabric		5
3	Effective Stress Principle	6	7
4-6	Shear Strength	12-13	
7	<u>Midterm Exam</u>		
8	Laboratory - Triaxial Test		
9-10	Consolidation	8-9	10
11	Laboratory - Consolidation Test		
12	Compaction and Field Applications	5	
13-14	Conduction Phenomenon		9
15	<u>Final Exam</u>		

POLICIES

- Students will be informed to any modifications from the syllabus during the semester.
- Communication from the instructor will be sent only to your NJIT e-mail address.
- All email to the Professor must include CE 641 – [Email Subject] in the subject line.
- Always bring your text book, a calculator and writing paper to class.
- Only NCEES approved calculators can be used during examinations (no cellphones):
 - Casio: All fx-115 and fx-991 models, Hewlett Packard: The HP 33s and HP 35s models, Texas Instruments: All TI-30X and TI-36X models
- All material handed out or discussed in class will be part of course material and students will be responsible for studying them in addition to prescribed sections of the text book.
- Save a copy of your work before submitting it, since it may not be possible to return the corrected homework back in time for you to study for examinations.
- Homeworks/projects must be done on 8 ½" × 11" engineering calculation paper, in a manner consistent with professional engineering calculation in practice.
- Professional presentation will be part of all grading.
- Homework/Projects/Reports are due at the beginning of class. Late work will incur a 50% deduction if handed in the same day, and 100% deduction after that.
- No make-up examination will be administered.
- Switch off laptops and cell phones during class, and examinations. No recording devices shall be used during class or examinations.

BASIS OF GRADING

Homework	10 points
Laboratory Tests	30 points
Midterm	30 points
Final Exam	30 points
Total:	100 points

Final Score (%)	Grade
Above 90	A
89-85	B+
84-80	B
79-75	C+
74-70	C
69 and below	F

STATEMENT ON ACADEMIC INTEGRITY

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu*