

**Texts:** Holtz, Kovacs & Sheahan, introduction to geotechnical engineering, 2nd Edition, Pearson, ISBN: 9780132496346

Optional: Lambe & Whitman, Soil Mechanics, Wiley; ISBN : 978-0471511922

**Instructor:** **Dr. Danial Esmaili, Ph.D., P.E.**, Office Room: Colton Hall # 205, Office Hours: TBA; E-mail: desmaili@njit.edu

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

Week	Topics	Holtz, Kovacs & Sheehan	Lambe & Whitman
1-3	Shear Strength	Chap 11, Chap 12 handout	
4	Direct Shear Test (lab)		
5	Triaxial Test (lab)		
6	Consolidation	Chap 8	
7	Oedometer Test (lab)		
8	Midterm Exam		
9-10	In-Situ Tests	Handouts	
11-12	Earth Structures and Soil Improvement		Chaps 13, 23, 24, 31, 34
13-14	Strength of Unsaturated Soils	Handouts	
15	Final Exam		

**Course Objectives:** By the end of the semester you can expect to be able to do the following: Select 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 of soils and stability of earth structures.

**POLICIES:** The NJIT Honor Code will be upheld and any violations will be brought to the immediate attention of Dean of Students.

Students will be consulted with by the instructor to any modifications or deviations from the syllabus throughout the semester.

Make sure that your email address stated in pipeline is correct and you are using it regularly.

Communication from the instructor will be sent only to the NJIT e-mail address.

Always bring your text book, a calculator and writing paper to class.

All material handed out or discussed in class by the instructor will be part of course material and students will be responsible for studying them in addition to the prescribed sections of the text book.

Please keep a copy of all your work until you received a final grade.

Please save a copy of your homework before submitting it to the instructor, since it may not be always possible for the instructor to return the corrected homework back in time for you to study for quizzes and examinations.

Homeworks/projects must be done on 8 ½" × 11" engineering calculation paper, in a manner consistent with professional engineering calculation in practice.

The instructor may photocopy and save your assignments and tests, as part of the effort necessary to renew accreditation of our educational programs. The copies, which will be accessible only to faculty, administration, and external reviewers, will be destroyed afterwards. All work should be done in a professional manner.

Homework is due at the beginning of class. No late homework will be accepted.

No make-up examination will be administered.

Switch off laptops and cell phones during class, quizzes and examinations. Plan on bringing a watch to keep time during examinations.

No recording devices shall be used during class or examinations.

## **BASIS OF GRADING**

Homework	20 points
Laboratory Tests	20 points
Midterm	25 points
Final Exam	35 points
Total:	100 points