

**CE 316 – Soil Mechanics- FALL 2002**

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Lectures: Tuesday and Thursday

Office Hour: Tuesday and Thursday (12pm – 1 pm), Wednesday (9am-10am)  
Or by appointment

Web: <http://hardhat.cme.ndsu.nodak.edu/staff/katti/index.html>

Follow links to course page

Course Call #: Check fall schedule for specific lab call #s

**Required Text:** Principles of Geotechnical Engineering, 5<sup>th</sup> ed. By Das  
Laboratory Manual by Das

Additional references and links to additional information will be placed on the course web page. Check the web page at least once a week for new information.

**Course Outline:**

<b>Tuesday</b>	<b>Thursday</b>	<b>Topic</b>	<b>Homework Problems</b>
8/27/2002		Introduction	
	8/29/2002	Soils and Rock	2.2,4,10
9/3/2002		Weight Volume Relationships	3.2,5,7
	9/5/2002	Weight Volume Relationships	3.9,11,13,17
9/10/2002		Consistency of Soil	3.22,3.25
	9/12/2002	Classification	4.2
9/17/2002		Classification	4.4
	9/19/2002	Compaction	5.2,6,7
9/24/2002		Compaction	5.9,11
	9/26/2002	Permeability	6.2,4,14,16
<b>10/1/2002</b>		<b>Test # 1</b>	
	10/3/2002	Permeability	6.18,6.19
10/8/2002		Flownets	7.2, 7.3
	10/10/2002	Flownets	7.5
10/15/2002		In Situ/Effective Stress	8.2,7,8.9
	10/17/2002	Capillary Rise	8.11,12,15
10/22/2002		Stresses in Soil Mass	9.7,12,17
	10/24/2002	Stresses in Soil Mass	9.19,20
10/29/2002		Consolidation	10.3,5,7
	10/31/2002	Consolidation Rate	10.10,13,18,20
11/5/2002		Mohr's Circle	9.1,9.2
	11/7/2002	Soil Failure Criteria	11.1,11.3
<b>11/12/2002</b>		<b>Test # 2</b>	
	11/14/2002	Laboratory Shear Tests	11.5,11.6
11/19/2002		Shear Strength	11.8,11.10,11.11
	11/21/2002	Shear Strength of Clays	11.15,11.17

11/26/2002		Shear Strength of Clays	11.21,11.23
	<b>11/28/2002</b>	<b>HOLIDAY</b>	
12/3/2002		Sensitivity of Clays & Field Tests on Clays	
	12/5/2002	Soil Exploration	17.3,17.9
12/10/2002		Recap	
	<b>12/12/2002</b>	<b>Test # 3 (comprehensive)</b>	

**Grading:**

Criteria	Portion of the Grade
Test 1	20%
Test 2	25%
Final	25%
Home work	10%
<b>Laboratory</b>	20%
Total	100%

Grade Distribution:	89.5 –100	A
	79.5 –89.4	B
	69.5-79.4	C
	59.5-69.4	D
	<59.5	F

**Basic Course Objective:**

After completing this course you should be able to classify soils and evaluate their engineering properties. You should be able to understand the fundamental mechanisms behind the engineering properties exhibited by various soil types and use this knowledge for conducting various engineering analysis.

**Policies and Procedures:**

There will be three tests which are all open book. Only the text by Das will be allowed during the examination. Test #3 will be a COMPREHENSIVE test. Makeup tests will be given ONLY in the cases of: 1) a doctor certified medical excuse, or 2) prior instructor approval. Every effort should be made to contact the instructor in the event of medical or personal problems, as soon as possible.

Homework assignments must be turned in by NOON on the day they are due. There will be no credit for late assignments. If you are unable to turn in the assignment on the due date for medical reasons, inform the instructor.

The student is expected to attend and perform experiments during all scheduled laboratory classes. The student should turn in the laboratory reports to the laboratory instructor on the due date in the required format. The reports should be neat and tidy and should be written in clear technical english. **The student is expected to clean up the work area after the experiment has been completed - No exceptions.** The laboratory instructor will provide you with additional instructions.

*Note: Any student with disabilities or other special needs, who needs special accommodations is invited to share these concerns or requests with the course instructor, as soon as possible.*

**Approved Academic Honesty Statement:**

All work in this course must be completed in a manner consistent with NDSU University Senate Policy, Section 335: Code of Academic Responsibility and Conduct.

( <http://www.ndsu.nodak.edu/policy/335.htm> )