COURSE OUTLINE FOR THE LABORATORY PORTION OF CET2251: SOILS IN CONSTRUCTION

Schedule:
L01: M from 11am-2pm, B003, Dillman
L02: W from 11am-2pm, B003, Dillman
L03: F from 11am-2pm, B003, Dillman

Instructor information:
Name: Ron Mauno, Lecturer
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Office hours: T 10am-Noon, R 2pm-4pm

Lab Grading:
Lab Reports (total of 6) ……..…….. 60%
Lab Quizzes (total of 6) ……..…… 15%
*Attendance/Participation ……..……..... 25%
100%

*For Attendance/Participation: The *data collection* lab sessions are weighted more heavily (by a factor of 2) than the *discussion* lab sections.

Textbook:
Soils in Construction, 5th edition by W.L. Schroeder, S.E. Dickenson and D.C. Warrington
(**Note:** ***Appendix A*** of this text contains *laboratory testing* procedures)

Reference Material:
Lab handouts and applicable *ASTM* Standards

Objectives:
The laboratory portion of the course has **three** main *objectives*:

1) To provide familiarity with the *equipment* and *procedures* utilized in determining various physical properties of soils.
2) To provide experience in performing *calculations* utilizing the data collected from the testing procedures.
3) To enhance *report writing skills*, including the use of basic computer software (Word-processing, Spreadsheets, CAD…).

ADDITIONAL LAB INFORMATION:

The use of *safety glasses* during the *data collection* labs is **required**.

The testing sessions will typically be done in *groups*. Do your share of the work.

Clean-up the lab (i.e., leave the lab cleaner than you found it.)

VERY IMPORTANT: Each student is responsible to write their **OWN** lab reports from *start to finish* (i.e., **no** *sharing/copying* is permitted). ***No*** credit (i.e., points) will be given to *shared/copied* reports and the *Dean of Students Office* will be notified. [1]

Unless otherwise noted, lab reports are due ***one week*** after discussing the calculations / requirements for the report.

Late policy for the lab reports: **-20%** (*off the top*) for each *week* late. (**Note:** Your grade will drop *substantially* if you get in the habit of submitting reports late.)

The quizzes will be *closed* note & book. They will be given at the *end* of the lab discussion session (i.e., *after* discussing the topic).

"MTU compiles with all federal and state laws and regulations regarding discrimination, including the Americans with Disability Act 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services at MTU, please call Gloria Melton, Associate Dean of Students (2212). For other concerns about discrimination, you may contact your advisor, department head, or the Affirmative Action Office (3310)."

[1] Definitions of academic dishonesty, including plagiarism, cheating, fabrication, and facilitating academic dishonesty, can be found in the *Academic Integrity*

SCHEDULE

WEEK #	DATE	TOPIC
1	1/9, L01	Brief introduction to the *lab portion* of the course (i.e., **No** formal lab this week)
	1/11, L02	"
	1/13, L03	"
2	1/16, L01	Perform **Consistency (Atterberg) Tests**: *Liquid Limit, Plastic Limit*
	1/18, L02	"
	1/20, L03	"
3	1/23, L01	Discuss calculations / requirements for *Lab Report #1* and take *Quiz #1*
	1/25, L02	"
	1/27, L03	"
4	1/30, L01	Perform **Grain Size Tests**: *Sieve Analysis, Hydrometer Test*
	2/1, L02	"
	2/3, L03	"
5		**NO LAB THIS WEEK** (*Winter Carnival*)
6	2/13, L01	Discuss calculations / requirements for *Lab Report #2* and take *Quiz #2*
	2/15, L02	"
	2/17, L03	"
7	2/20, L01	Perform **Lab Density (Compaction) Tests**: *Standard* and *Modified* Proctors and Perform **Specific Gravity Test**
	2/22, L02	"
	2/24, L03	"
8	2/27, L01	Discuss calculations / requirements for *Lab Report #3* and take *Quiz #3*
	3/1, L02	"
	3/3, L03	"
		- SPRING BREAK -
9	3/13, L01	Perform **Field Density Test**: *Sand Cone Density*
	3/15, L02	"
	3/17, L03	"
10	3/20, L01	Discuss calculations / requirements for *Lab Report #4* and take *Quiz #4*
	3/22, L02	"
	3/24, L03	"
11	3/27, L01	Perform **Permeability Test(s)**: *Constant Head* and/or *Falling Head*
	3/29, L02	"
	3/31, L03	"
12	4/3, L01	Discuss calculations / requirements for *Lab Report #5* and take *Quiz #5*
	4/5, L02	"
	4/7, L03	"
13	4/10, L01	Perform **Strength Test**: *Unconfined Compression*
	4/12, L02	"
	4/14, L03	"
14	4/17, L01	Discuss calculations / requirements for *Lab Report #6*, take *Quiz #6*, complete course evaluations
	4/19, L02	"
	4/21, L03	"