CIVIL AND ENVIRONMENTAL ENGINEERING

COLORADO STATE UNIVERSITY

Course Syllabus

CIVE 355 – Introduction to Geotechnical Engineering

Semester:	Spring 2018
Credits:	3
CRN:	16379
Prerequisite:	CIVE 360 – Mechanics of Solids
Lecture time:	MWF 11:00 – 11:50 am
Lecture location:	Scott Bioengineering 229
Instructor:	Professor J. Scalia
Instructor's office:	A217 Engineering Hall
Instructor's email:	joseph.scalia@colostate.edu
Office hours:	Monday 3:00 – 4:00 PM, Wednesday 1:30 – 2:30 PM, Thursday 12:00 – 1:00 PM, and by appointment.

Purpose of the Course

Geotechnical engineers apply soil mechanics to analysis, design, and construction of foundations, slopes, retaining systems, embankments, roadways, tunnels, levees, wharves, landfills, and other systems that are made of or supported by soil.

The purpose of this course is to provide an understanding of soil mechanics, and to present an introduction to geotechnical engineering design. Concepts covered will include the fundamentals of soil origin, composition, structure, and properties, and introductions to soil identification, classification, permeability, strength, and compressibility.

Learning Environment

The primary emphasis of this course will be on readings, lectures, and lecture notes with concepts reinforced through homework.

Required text: Principles of Geotechnical Engineering by Das and Sobhan (9th Edition); ISBN**:** 9781305970939. The SI Edition of the textbook is also acceptable; ISBN: 9781305970953.

Course website: canvas.colostate.edu.

Learning Assessment

Grading will be based on the following:

Homework	10%
Minute papers	10%
Reading quizzes	10%
Concept quizzes	10%
Midterm exam	30%
Final exam	30%
	100%

Final grades will be based on the traditional grading scale:

Grade	Percent range	Grade points
A^+	≥ 96.7%	4.000
A	< 96.7%; ≥ 93.3%	4.000
A^-	< 93.3%; ≥ 90.0%	3.667
B^+	< 90.0%; ≥ 86.7%	3.334
B	< 86.7%; ≥ 83.3%	3.000
B^-	< 83.3%; ≥ 80.0%	2.667
C^+	< 80.0%; ≥ 76.7%	2.334
C	< 76.7%; ≥ 70.0%	2.000
D	< 70.0%; ≥ 60.0%	1.000
F	< 60.0%	0.000

Homework assignments will be given throughout the semester with defined due dates that will be strictly enforced. All homework assignments will be collected and graded. Grading will be based on a scale of 1 to 5, where 5 = excellent, 4 = very good, 3 = good, 2 = fair, and 1 = poor. A grade of zero will be given if homework is not turned in. Elements considered in homework grading will be completeness of the solution (e.g., identifying given information and what to find; clear, concise, and neat solution) and overall presentation. Answers to homework problems will be provided such that students can check their answers. All homework turned in for grading must be completed individually; however, students are welcome to discuss problems with a classmate, teaching assistants, and the professor.

Minute papers will be assigned at the end of each class day. Full credit will be given for completion a class-related minute paper.

Reading quizzes will be given throughout the semester at the beginning of class. The quizzes will last approximately 5 minutes and will be derived from assigned readings. These quizzes will not be announced prior to the day of the quiz.

Concept quizzes will be given throughout the semester, and will be announced in class one week prior. The quizzes will last approximately 15 to 20 minutes and will be derived from class content and homework assignments. The purpose of the quizzes is to gage students' development and provide feedback prior to an exam. Thus, the quizzes are designed as a benchmark for which students can evaluate their comprehension of class content and ability to solve problems prior to taking an exam.

Two exams will be given during the semester. The first exam is Wednesday, March 7th from 5:00 – 6:50 pm. The second exam will be during the scheduled final exam period (*Wednesday during finals week at 4:10 – 6:10 pm in Scott Bioengineering 229*). The length of the exam will be catered to the allotted time. Both exams are closed book and closed notes. The exams will not be comprehensive. However, some basic principles carry over from exam to exam, and therefore, must be mastered in terms of the natural progression of learning.

All homework, quiz, and exam solutions (except for the final) will be placed on the course website[1] after homework, quiz, or exam is given in class and graded. Please check these files before asking questions regarding grading of your quizzes and exams.

Make-up concept quizzes and exams will not be given, except in extraordinary situations and only if I have been notified well in advance of the original quiz or exam date. In addition, I typically will not give the same quiz or exam as a make-up. Thus, anyone taking a make-up quiz or make-up exam will not necessarily be solving the same problems or answering the same questions as the rest of class. Make-up minute papers due to missed classes will not be given; however, these assignments will not be counted against your grade if I am notified of your absence at least 24 hr in advance. A maximum of 3 reading quizzes, and 3 minute papers, may be missed throughout the semester.

All quiz grades will be based on the above traditional scale. For exam grades where the class above is above an 80%, grades will be based on the above traditional grading scale. If the average is below 80%, the grading scheme will reflect the actual class average.

Classroom and College Policy Information

This course will adhere to the Colorado State University Academic Integrity Policy as found in the General Catalog[2] and the Student Conduct Code[3]. Academic misconduct undermines the educational experience at Colorado State University, lowers morale by engendering a skeptical attitude about the quality of education, and negatively affects the relationship between students and faculty. Any student found responsible for having engaged in academic misconduct will be subject to academic penalty and/or University disciplinary action. Examples of academic misconduct include: Cheating, plagiarism, unauthorized possession or disposition of academic materials, falsification, and facilitation of any act of academic misconduct.

Cell phones will not be allowed during quizzes and exams. Please turn off or silence phones and store phones out of sight during class.

The *calculator policy* of the National Council of Examiners for Engineering and Surveying (NCEES) will be enforced in this class. Details of the entire policy are provided at: http://ncees.org/exams/calculator-policy/. This policy will be enforced in all quizzes and exams, and no other models of calculators are permitted. The following calculators are permitted for quizzes and exams (but no others):

- Casio: All fx-115 and fx-991 models;
- Hewlett Packard: HP 33 and HP 35 models;
- Texas Instruments: TI-30X and TI36X models.

[1] *canvas.colostate.edu*
[2] *catalog.colostate.edu/general-catalog/policies/students-responsibilities/*
[3] *conflictresolution.colostate.edu/conduct-code*

On occasion, my academic duties require that I must travel (e.g., attend conferences and meetings, present seminars, etc.). During these trips, you will have a substitute instructor. You are still responsible for all material covered in class during these days that I am absent.