MEMORANDUM FOR STUDENTS ENROLLED IN CENG 3336

SUBJECT: CENG 3336 Administrative Instructions – Spring 2020

Course Specific Policies

1. CENG 3336 Soil Mechanics and Foundation Design
   Class Time: Monday and Wednesday 12:20 p.m. – 1:15 p.m.
   Class Room: RBS 1031

2. Instructor: Dr. Gokhan Saygili
   Office: RBS 1007
   Email: gsaygili@uttyler.edu

3. Welcome to CENG 3336 – Soil Mechanics and Foundation Design. In this course we will explore the fundamental mechanical and physical properties of soils and their relation to soil action in problems of Geotechnical Engineering, such as classification, permeability, shearing strength, and consolidation. You will also receive an introduction into the wonderful world of foundation design. I am confident that you will find this course to be interesting, challenging, and rewarding. A tentative course schedule is provided in Attachment 1.

   This course aims to provide an understanding of the nature of soils in engineering materials, common soil classification schemes, the importance of water in the soil and the effects of water movement, methods of predicting soil settlements, the stress-strain-strength response of soils, earth pressures, and bearing capacity. In the course laboratory experiences, you will examine soil properties and extract the necessary parameters for geotechnical design. Specific course objectives are provided in Attachment 2.

4. If you will miss a scheduled class, you are still responsible for the material.

5. You are encouraged to seek additional instruction during my office hours or by appointment. Office hours this semester will be on Monday and Wednesday at 9:30 am – 11:30 am. These hours are posted outside my office door**. I also maintain an open door policy so that if I'm in my office, during regular office hours, feel free to drop by and ask a question.**

6. Class Room Procedures:

   a. Bring study notes, textbook, note-taking material, and calculator to every class. You may not borrow or exchange calculators during graded events. If your calculator fails during a graded exercise, I am not responsible to furnish a substitute. Class preparation is your individual responsibility. Please refer to Calculator Policy below.

   b. Textbooks:

      1) Principles of Geotechnical Engineering, 8th Edition by Braja M. Das and Khaled Sobhan, 2013
      ISBN 1133108660

      2) Soil Mechanics Laboratory Manual, 8th Edition by Braja M. Das, 2012
      ISBN 0199846375

   c. There will be unannounced quizzes throughout the semester. These quizzes will cover material covered in previous lectures

   d. Laboratory attendance is required and a short quiz will be given ***during the first five minutes*** of lab

7.Course Materials:

a. I will post all course materials on Canvas. Canvas enrollment is now automatic with course registration, but you should ensure that you can access the class Canvas page.

b. I may also on occasion email you homework tips or points of clarification that are made aware to me outside of class. All email correspondence will take place through the Canvas system, and therefore using your Patriot email accounts; so check your Patriot email account often.

8.Exams and Grading:

a. Grade Breakout and Cutoffs:

Course Points		**Grade Scale**		
Mid-term Exams (2 at 200 each)	400 (20%)	A	90.0%	1,800
Assignments / Quizzes	500 (25%)	B	80.0%	1,600
Laboratory Experience	400 (20%)	C	70.0%	1,400
Professional Practice Grade	200 (10%)	D	60.0%	1,200
Final Examination	500 (25%)	F	<60.0%	<1,200
	2,000 (100%)			

University grade breaks will be used in final grade posting. If you earn a cumulative average of less than 65% on all exams, or if you fail to earn at least 50% on the final exam you may fail the course, **regardless of your course grade**.

b. Mid-term Exams and Final Exam:

1) The dates for all exams are included in the course schedule. Official reasons for missing an exam are outlined in the UT Student Handbook. You are required to take a make-up Exam, regardless of your reason for missing the scheduled Exam. Report any conflict to me as soon as possible prior to the Exam.

2) The mid-term exams and final exam are closed book. You can use a TI-30 calculator (or FE equivalent see calculator policy below).

3) Use the restroom prior to coming to class to take an exam. Suspicious restroom breaks in the middle of an exam are not acceptable.

4) Solutions to exams will not be posted on Canvas, but you may stop by office and see exam solutions.

c. Calculator Policy: Only NCEES approved calculators will be permitted during tests and your test will be collected and your grade will be a zero if you are caught using a non-approved calculator.

d. Laptops/PDAs/MP3 players/Cell Phones or other electronic devices: The use of any electronic device, except an approved calculator, is not permitted during exams. Your exam will be collected and your grade will be a zero if you are caught using a non-approved electronic device. The use of phones and MP3 players is not permitted during lessons.

e. Collection of Student Work: Throughout the semester I will collect student work (best, average, and worst) for the ABET course and outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished.

f. Embedded indicators of accomplishment of program outcomes: At times throughout the semester, portions of student work will be analyzed to determine if our program is accomplishing stated program outcomes based on established metrics. **If your work is below the minimum established metric, you will be required to repeat the assignment or that portion of the assignment until you achieve the minimum acceptable standard based on the metric.**

9. Homework: Homework problems will typically be assigned on a daily basis. Students may *discuss* their homework solutions with one another, but each student must submit their own, **independent** solutions (i.e. you may not just copy someone else's homework). If you receive assistance from a fellow student on a particular problem you must cite that assistance within your solution. The homework due date will be clearly given with the homework assignment. Homework is due by 5 pm on the due date. You may turn in your homework directly to me in my office.

   HOMEWORK FORMAT: The production of a neat, organized, high-quality homework assignment cannot be overestimated nor can its importance to your course grade be overstated. A homework assignment should be something you are proud of and not something hastily "slapped together". Toward this end, considerable emphasis will be placed on not only getting the correct answer but also on how the solution is presented.

   All homework is mandatory and becomes part of your grade. Failure to submit any required homework will result in an incomplete. As an engineer your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work are important, and both will be graded. It is critical that you show all of your work and leave "footprints" so that it can be easily followed.

   a. Problem Sets:

      1) **Use Engineer paper only or full-page printouts from Mathcad, Excel, Visual Analysis, etc.** You may neatly tape or glue short computer printouts onto Engineer paper at the appropriate place in the logical flow of the problem. Only use one side of a page. Clearly present **a brief problem statement and a sketch** with your solution. Clearly and concisely explain each step. For narratives of more than a line or two, use your word processor or the text capability if you are using MathCAD or Excel. If you are writing out a paragraph or more, you must type it.

      2) Late Submissions. It is a basic principle of professionalism that **"Professionals are not late."** A "COORDINATED LATE" submission occurs when you will miss the deadline for a graded homework assignment and you contact me in advance. Notification immediately before the submission will not suffice. Deductions to your assignment grade for late submissions will be given as follows:

         1. 0-24 hours late — a deduction of 25% of the earned grade
         2. 24-48 hours late — a deduction of 50% of the earned grade
         3. More than 48 hours late — No credit. **Assignments must still be submitted.**

         Obviously there are circumstances that can occur that make a timely submission impossible and I will work with you when and if they occur. *I will not play the game of having a stack of incomplete homework assignments turned in on the last day of class. Late assignments should still be submitted within a week unless you coordinate otherwise with me. Habitually late homework WILL have a significant negative impact on your professional practice grade!*

      3) All homework in this course must be properly documented. It is likely that you might receive help from your classmates - just simply document it. Information from the course textbooks (equations and outlines of procedures), class notes, or me is considered immediately available to all students and need not be acknowledged or documented. **YOU ARE REQUIRED TO ACKNOWLEDGE AND DOCUMENT ALL OTHER ASSISTANCE AND REFERENCES USED.** Documentation will be accomplished in accordance with any manual for writing, footnote or endnote, for papers, but for written homework, just place the documentation right at the point you received help using who and what assistance.

   b. Assigned readings: Doing the assigned reading prior to class will help you to understand the material presented during the instruction and will fill in gaps for things we do not cover (***I will not cover everything***). It will also make you more familiar with terms and concepts to be covered. Reading the assignment prior to attending class will enhance your ability to learn!

10. There may be opportunities to earn bonus points for additional work on problem sets, exams, or for completion of other optional assignments. Opportunities for bonus points will be clearly identified by me and announced in class. Make use of these opportunities to extend your learning!

11. Professional Practice. During this semester, a portion of your grade in this course (10%) will be derived from a level of professional practice expectations. These expectations include a professional demeanor and work ethic (attitude), consistent daily preparation (assignment reading, appropriate materials brought to class, homework completed on time, etc.), commitment to learning and fulfilling obligations (attendance, on time), and being engaged in class activities (participation).

12. UT Tyler Honor Code: Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

13. Students Rights and Responsibilities: To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www.uttyler.edu/wellness/rightsresponsibilities.php

14. Campus Carry: We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at http://www.uttyler.edu/about/campus-carry/index.php

15. UT Tyler a Tobacco-Free University: All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

    Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

    There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

16. Grade Replacement/Forgiveness and Census Date Policies: Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

    Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

    The Census Date is the deadline for many forms and enrollment actions of which students need to be aware.

    These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

17. State-Mandated Course Drop Policy

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).
Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

18. Student Accessibility and Resources

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Tyler at Texas offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit https://hood.accessiblelearning.com/UTTyler and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with an Accessibility Case Manager. For more information, including filling out an application for services, please visit the SAR webpage at http://www.uttyler.edu/disabilityservices, the SAR office located in the University Center, # 3150 or call 903.566.7079.

19. Student Absence due to Religious Observance

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

20. Student Absence for University-Sponsored Events and Activities

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

21. Social Security and FERPA Statement
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

22. Emergency Exits and Evacuation

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

23. Student Standards of Academic Conduct

Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

i. "Cheating" includes, but is not limited to:
- copying from another student's test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;

- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

ii. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.

iii. "Collusion" includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

iv. All written work that is submitted will be subject to review by SafeAssignTM, available on Canvas.

UT Tyler Resources for Students

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254)

Attachments x2

Gokhan Saygili PhD, PE

Topics Covered and Schedule

SUBJECTS	LESSONS
Course introduction	1
Physical soil properties	2
Classification	1
Compaction	2
Water flow through soil	2
Soil stress	4
Soil settlement	3
Shear strength	2
Lateral earth pressure	2
Bearing capacity	2
Slope stability	1
Exams	2
Exam reviews	2
Course summary	1
Totals:	**27**

CENG 3336 Soil Mechanics and Foundation Design Course Schedule - Spring 2020

Lesson	Lab	Date	Topic	Homework
1	1	13-Jan	Introduction to Soil Mechanics / Foundations	HW1
2		15-Jan	Origin of soils and grain size	HW2
-	-	20-Jan	No class - MLK Day	
3	2	22-Jan	Weight - Volume relations	HW3
4	3	27-Jan	Plasticity and soil structure Census Day (Withdraw without penalty)	HW4
5		29-Jan	Classification of soil	HW5
6	4	3-Feb	Compaction	HW6
7		5-Feb	Relative compaction and compaction equipment	HW7
8	5	10-Feb	Permeability	HW8
9		12-Feb	Seepage	HW9
10	6	17-Feb	In-situ stress	HW10
11		19-Feb	Stresses in a soil mass	HW11
12	7	24-Feb	Midterm I – Review	
13		26-Feb	Midterm I	
14	8	2-Mar	Vertical stress due to surface loads	HW12
15		4-Mar	Introduction to settlement	HW13
-	-		Spring Break	
16	9	16-Mar	Primary consolidation settlement	HW14
17		18-Mar	Time-rate of consolidation settlement	HW15
18	10	23-Mar	Shear Strength	HW16
19		25-Mar	Shear Strength	HW17
20	11	30-Mar	Lateral earth pressure (Last Day to withdraw)	HW18
21		1-Apr		HW19
22	12	6-Apr	Midterm II - Review	
23		8-Apr	Midterm II	
24	13	13-Apr	Bearing capacity	HW20
25		15-Apr	Shallow foundation design	HW21
26		20-Apr	Slope stability	HW22
27		22-Apr	Course Summary	HW23

Final exam

CENG 3336 Course Objectives:

1. Develop an organized approach to solving soil mechanics problems.
2. Describe the physical properties of soil.
3. Use phase diagrams to obtain soil/water relationships.
4. Classify soil according to the USCS and AASHTO systems.
5. Explain compaction and calculate the relative density of a soil.
6. Calculate total stress, effective stress, and pore water pressure of soil.
7. Calculate soil permeability based on lab and field data.
8. Analyze and construct flow nets for two-dimensional flow through soil.
9. Calculate the total 1-D settlement and time rate of settlement of soil.
10. Analyze and develop a laboratory field curve for settlement parameters of a soil.
11. Describe the Mohr-Coulomb failure mode for soil.
12. Determine soil strength parameters from laboratory shear tests.
13. Calculate lateral earth pressure on a retaining structure.
14. Determine the bearing capacity of soil for a given foundation.
15. Analyze and design a shallow foundation for bearing capacity and settlement.
16. Analyze a soil for slope stability.
17. Describe the role of laboratory testing in geotechnical engineering
18. Solve engineering analysis and design problems using Mathcad and Excel