

## SYLLABUS

<b>Instructor in Charge:</b>	Prof. Xiaoyu Song Office: Weil 480C; Tel: 352 294-3656 Email: xysong@ufl.edu Office Hours: 13:00 am - 14:00 pm, Mon. and Wed. Location: Virtual via Zoom
<b>Grader:</b>	TBD
<b>Schedule:</b>	MWF, 3rd Period (9:35 - 10:25 am)
<b>Classroom:</b>	Virtual and LIVE via Zoom

### Course Objectives:

This course aims to introduce the students geotechnical engineering, which consists of topics of (1) effective stress with seepage, (2) geostatic stress and stress increase due to subsurface loads, (3) soil settlements, (4) earth pressure against retaining walls for various subsurface conditions, (5) soil slope stability analysis, (6) soil bearing capacity for foundations, (7) Subsoil Exploration, and (8) new frontier of geotechnical engineering. The objectives will be realized through (1) virtual LIVE lectures and planned office hours through Zoom (or at flexible time by appointment), (2) in-class example problems and homework problems, (3) critical thinking problems to challenge and enhance the thoughtful process and understanding of students on the subjects covered, (4) case studies, and (5) 4 in-class tests proctored via Zoom.

**Prerequisites:** CEG 4011

**Textbook (required):** Braja M. Das and Khaled Sobhan, **Principles of Geotechnical Engineering**, 8th Edition, Pearson.

### Course Description:

In line with the adopted textbook, the course will cover (1) Seepage, (2) In Situ Stresses and Stresses in a Soil Mass, (3) Settlement Analysis, (4) Lateral Earth Pressure, (5) Slope Stability, (6) Soil Bearing Capacity for Shallow Foundations, and (7) Subsoil Exploration. The students' learning experience will be enhanced by (1) two guest lectures presented by a distinguished geotechnical engineering professor (NAE, TBA in class) and a geotechnical engineering consultant (a former Gator graduate, TBA in class), and (2) videotaped Terzaghi Lecture, Rankine Lecture and Peck Lecture presented by outstanding researchers and engineers in geotechnical engineering (Note: All about advanced topics in geotechnical engineering).

### Tentative Course Outline:

Lecture/Test	Date	Description	HW(given)
1	8/31 (M)	Kick-off meeting	
2	9/2 (W)	8.4, 8.5	
3	9/4 (F)	8.6, 8.7, 8.8	#1
-	9/7(M)	Holiday	
4	9/9 (W)	8.9, 8.10, 8.11 (+Terzaghi Lecture)	
5	9/11 (F)	9.2, 9.3, 9.4	#2
6	9/14(M)	9.5, 9.6, 9.7	
7	9/16 (W)	9.8, 9.9, 9.10 (+Terzaghi Lecture)	
8	9/18 (F)	Review 1	
9	9/21 (M)	<b>Test 1 - Chapters 8 - 9</b>	
10	9/23(W)	10.4, 10.5, 10.6, 10.7	
11	9/25 (F)	10.8, 10.9, 10.10	#3
12	9/28 (M)	10.11, 10.12, 10.13	
13	9/30 (W)	11.2, 11.3	
-	10/2 (F)	Homecoming	
14	10/5 (M)	11.4, 11.10	#4
16	10/7 (W)	11.13, 11.14	
17	10/9 (F)	11.16, 11.17	
18	10/12 (M)	12.2, 12.3, 12. 14, 12.15	
19	10/14 (W)	12.16, 12.18, 12.19	#5
20	10/16 (F)	Review 2	
21	10/19 (M)	<b>Test 2 - Chapters 10 - 12</b>	
22	10/21 (W)	13.2, 13.3, 13.4	
23	10/23 (F)	13.5, 13.6, 13.7	#6
24	10/26(M)	13.8, 13.9, 13.10	
25	10/28 (W)	13.11, 13.12, 13.13	
26	10/30 (F)	14.2, 14.3, 14.4	
27	11/2 (M)	14.5, 14.6, 14.7	#7
28	11/4 (W)	14.8, 14.9, 14.10, 14.11	
29	11/6 (F)	<b>Guest Lecture 1</b>	
30	11/9 (M)	15. 6, 15.7, 15.8 (+ Rankine Lecture)	#8
-	11/11(W)	Holiday	
31	11/13(F)	15.12, 15.13, 15.14 (+ Peck Lecture)	
32	11/16 (M)	1.5.15, 15.16, 15.17	
33	11/18 (W)	Review 3	
34	11/20 (F)	<b>Test 3, Chapters 14-15</b>	
35	11/23 (M)	16.2, 16.3, 16.4, 16.5	#9
-	11/25 (W)	Holiday	
-	11/27 (F)	Holiday	
36	11/30(M)	<b>Guest Lecture 2</b>	
36	12/2 (W)	16.6, 16.7, 16.8, 16.9, 16.10	
37	12/4(F)	Chapter 17	

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Lecture	Date	Description	HW(given)
38	12/7 (M)	Review 4	
39	12/9 (W)	<b>Test 4 - Chapter 16</b>	
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**Grading:**

5% = Attendance  
30% = 9 Homework Assignments  
65% = 4 In-class Tests

**Final letter grades will be assigned based on the following scale:**

A	100 - 92%
A <sub>-</sub>	91 - 89%
B <sup>+</sup>	88 - 86%
B	85 - 83%
B <sub>-</sub>	82 - 80%
C <sup>+</sup>	79 - 77%
C	76 - 73%
C <sub>-</sub>	72 - 70%
D <sup>+</sup>	69 - 67%
D	66 - 63%
D <sub>-</sub>	62 - 60%
E	59 - 0%

**Assignments:**

Homework will be assigned approximately weekly and it is due at the start of the class period on the day specified. **Late homework will receive a 10% penalty per day it is late.** These rules apply unless advance written request has been submitted to the instructor and approved. Illegible homework is subject to being rejected by the Course Grader.

**Exams:**

Exams will be given in-class one lecture period. Each exam will concentrate on the material most recently covered. One page (front and back) will be allowed as a formula reference. Formulas, general procedures, tables, and other general information may be included. Only calculators are allowed for use during the exams.

**Make-up Exam/Late Assignment Policy:**

Do not miss an exam. Make-up exams will only be given if prior approval is granted by the instructor and the student must make a reasonable attempt to take the exam prior to the scheduled exam date. Exams can be reviewed at any time in the instructor's office but will not be returned to keep. **The instructor will discuss any exam or homework within 1 week (excluding holidays) after return. After this time, grades are final.**

**Homework/Test Submission Instructions:**

1. Submit your homework/test with all sheets in one single PDF file. Your name, course, homework number and date should appear on pages - clearly written. If there are multiple pages include page numbers.
2. Submit the e-copy of your HW (scanned with high-resolution) through E-learning course website protocol (Tips: free scanner apps available for your smart phone).
3. Work should be organized and neat with assumptions clearly stated. Show units throughout the work and clearly identify the answers (e.g., boxed, underlined, etc.).
4. Numerical answers should be given with an appropriate number of significant digits.

**Statement of Privacy Related Issues (New Fall 2020):**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

**Course Evaluation:**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>.

Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>.

Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### Students Requiring Accommodations:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### University Honesty Policy:

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to

appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **Commitment to a Safe and Inclusive Learning Environment:**

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources,  
352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs,  
352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs,  
352-392-0943, nishida@eng.ufl.edu

### **Student Privacy:**

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

### **Campus Resources:** Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence  
If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the Office of Title IX Compliance, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, [title-ix@ufl.edu](mailto:title-ix@ufl.edu)

Sexual Assault Recovery Services (SARS)  
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu). <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601.  
Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive

assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420.

General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus:

[https://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.