ConE 432 Soil Engineering (Spring 2013)

Determination of civil engineering properties of soil and their behavior, identification, grain size analysis, compaction, permeability, consolidation, and shear strength. Attention is given to foundation system selection, design, and construction methods. Prerequisites: ConE 221 and ConE 341

Instructor: Ilseok “Eddie” Oh, Ph.D.
Associate Professor, Construction Engineering, TAMU-C
AGIT-209, Eddie.Oh@tamuc.edu, (903) 886 – 5468

Office Hour: (M & W) 9:00am – 11:00am (T & R) 9:15am – 10:00am

Lecture/Lab: (M & W) 8:00am – 8:50am, AGIT-126F (F) 8:00 – 9:40am, AGIT-126F


Course website: www.ioh.pageout.net

Learning Outcomes:

Upon satisfactory completion of the course, the student will be able to:
1. Discuss geotechnical site-investigation methods.
2. Determine various engineering properties of soils and discuss their applications in practice.
3. Analyze the movement of groundwater and discuss their applications in practice.
4. Analyze subsurface stresses in soils and the shear strength of soil and discuss their applications in practice.
5. Analyze and design foundation systems, including their settlements.
6. Perform standard lab testing procedures on soils and prepare written reports.

Course Policies:

- Course Requirements and Grades
  Attendance & Participation 10%
  Assignment & Quizzes 20%
  Exam I 20%
  Exam II 20%
  Exam III 30%

- Grading

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100–90</td>
<td>89–80</td>
<td>79–70</td>
<td>69–60</td>
<td>59–0</td>
</tr>
</tbody>
</table>
• Class Attendance Requirement (two lateness = one absence)

<table>
<thead>
<tr>
<th># of Absence</th>
<th>0 – 3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Deduction</td>
<td>0</td>
<td>-5</td>
<td>-10</td>
</tr>
</tbody>
</table>

• All assignments should be submitted at the beginning of the class and the due date is “next” class meeting time. Only selected HWs will be graded. Unless prior arrangements are worked out with the instructor, a penalty of 50% will be assessed on late assignments submitted within next class meeting time of the due date. After the grace period, ZERO credit towards a final grade.

• Academic Dishonesty: Texas A&M University-Commerce will not condone plagiarism in any form. Plagiarism represents disregard for academic standards and is strictly against University policy. Plagiarized work can result in a “0” on a given assignment(s) or an “F” for the course as well as further administrative sanctions permitted under University policy. You may discuss course work and other course materials with fellow students (except during tests), but it is inappropriate to have another student do your course work or provide you with any portion of it. Guidelines for properly quoting someone else’s writings and the proper citing of sources can be found in the APA Publication Manual. If you do not understand the term “plagiarism”, or if you have difficulty summarizing or documenting sources, contact your professor for assistance.

• ADA Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact the Office of Student Disability Resources and Services (Gee Library 132, 903-886-5150, StudentDisabilityServices@tamuc.edu)

• Student Conduct: All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook). Students are expected to attend all class periods and to be prepared for each class. Students are expected to refrain from any disruptive behaviors during class, which includes but is not limited to working on assignments/projects from another course, reading non-course materials, or using the computer for non-class purposes. Cell phones, iPods, and other electronic devices should be turned off during class.

Class Topics:

• Introduction to Geotechnical Engineering (1)
• Engineering Geology (1)
• Site Exploration and Characterization (2)
• Soil Composition (2)
• Soil Classification (2)
• Excavation, Grading, and Compacted Fill (2)
• Groundwater Flow (2)
• Subsurface Stress (2)
• Compressibility and Settlement (2)
• Consolidation (2)
• Soil Strength (2)
• Stability Earth Slopes (2)
• Foundations (4)
• Earth Retaining Structures (3)