SOIL MECHANICS AND FOUNDATIONS  
CNST 3372

General
Course Instructor: Dr. Ray Meyer  
Course Time: 7:00 – 10:00 p.m. Mondays  
Office Hours: By appointment via email: raymeyer.tx@gmail.com  
Office location: 111D T1  
Contact Information: raymeyer.tx@gmail.com

Course Description
The course gives an overview of the difference and correlation between soil mechanics and foundations engineering. Soil mechanics is the branch of engineering that involves the study of the properties of soils and their behaviors under stress and strain in idealized conditions. Foundation engineering is the application of the principles of soil mechanics in the planning, design and construction of foundations for buildings, highways, dams and so forth. This course presents a detailed look into soil properties and foundations design.

Course Prerequisite
CNST3355 Strength of Construction Materials

Textbook
Cheng Liu & Jack B. Evett (2008), Soils & Foundations

Learning Objective
Upon the completion of the course students will demonstrate the ability to:
- Understand terminology and units of measurements related to soil explorations;
- Understand ASTM test methods;
- Understand terminology related to shallow and deep foundations for buildings
- and shoring; and
- Understand how to do exercises for characterizing soils.

In addition to the learning objectives above, this course emphasizes Ethics, Safety, and Oral/Written Communication.

Grading
Participation 10%  
Project 10%  
Pop Quizzes 30%  
Exam I 25%  
Exam II 25%

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<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to soil</td>
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<td>2</td>
<td>Engineering Properties of soils</td>
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<td>3</td>
<td>Soil Exploration</td>
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<td>4</td>
<td>Soil Compaction and Stabilization</td>
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<td>Water in Soil</td>
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<td>Stress Distribution in Soil</td>
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<td>7</td>
<td>Consolidation of Soil &amp; Settlement</td>
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<td>8</td>
<td>Midterm Exam</td>
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<td>9</td>
<td>Shear Strength of Soil</td>
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<td>10</td>
<td>Shallow Foundations</td>
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<td>11</td>
<td>Deep Foundations</td>
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<td>12</td>
<td>Lateral Earth Pressure</td>
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<tr>
<td>13</td>
<td>Final Exam</td>
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**Academic Honesty**

Each student is responsible for maintaining high standard of academic honesty and ethical behavior. Students are expected to work their exams, quizzes and reports on their own, based on their individual level of progress with the material. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University (See students Handbook for a detailed description of the UH Academic Honesty policy).

**Students with Disabilities**

University of Houston provides, upon request, appropriate academic adjustments for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Center for students with Disabilities (713/743-5400) for more assistance.

**Class Attendance**

A student will be dropped from the course if he/she accumulates more than two absences in the first 3 weeks. Students who accumulate **more than four absences** during the semester will receive no credit for class participation (this includes laboratory days).

*Quizzes will be given almost at the end of every class.*

**Exam and Assignment Policy**

Exams will include material covered in class discussions and homework assignments. Exam make-up will be given only in the event of a verified emergency or doctor-verified illness. Assignments turned in late will be counted off 20 percent per day (with the exception of the previously listed cases). The student is responsible for all reading assignments and class handouts whether or not covered in class or listed in the syllabus.

**Course Evaluation**

A course/instructor evaluation will be conducted at the last scheduled lecture. Any suggestions on improving the course, however, are welcome throughout the term. The instructor has the discretion to make changes to this syllabus as circumstances require.