



Syllabus
CE 335 Engineering Mechanics of Soils
Spring 2007

Instructor: Dr. Angelica Palomino
226A Sackett
Phone: 865-9427
Email: amp26@psu.edu
http://www.engr.psu.edu/ce/Faculty/palomino_a.htm

Lecture: MWF 11:15am – 12:05pm
108 Henderson

Office Hours: MW 1:30 – 3pm, or by appointment

ANGEL: <https://cms.psu.edu/frameIndex.htm>
The ANGEL system will be used for communication, postings, and other course-related items as the need arises.

Text: *Principles of Geotechnical Engineering*, 6th ed., B.M. Das,
Brooks/Cole, Thomson Learning, Inc., 2006, ISBN: 0-534-55144-0.

Prerequisites:

1. EMCH 013 Strength of Materials
2. GEOSC 001 Physical Geology or AE 221 Architectural Building Materials

Grading Policy

Homework ^a	35%	Bi-Weekly Quizzes ^b	55%
In-Class Participation ^c	10%		

^aHomework assignments are due two weeks from the assignment date and must be turned in at the beginning of class – late assignments will not be accepted.

^bQuizzes will be given at the beginning of class and will be closed book and closed notes. The quizzes will include questions based on the reading assignments and lectures.

^cIn-class participation will consist of in-class example problems and interaction with the guest speaker.

Letter grades will be based on the weighted average specified above and assigned as follows:

A = 94-100%	B+ = 87-89%	C+ = 76-79%	D = 60-69%
A- = 90-93%	B = 84-86%	C = 70-75%	F < 60%
	B- = 80-83%		

Every student is responsible for upholding the academic integrity policy. **Any student caught cheating on any assignment will receive a grade of zero for that assignment.** For more information on academic integrity, see <http://www.engr.psu.edu/CurrentStudents/acadinteg.asp> or <http://www.psu.edu/dept/oue/aappm/G-9.html>

On-Line Class Participation

All course emails and web postings will be made using the ANGEL course management software. You will need to regularly login (<https://cms.psu.edu/frameIndex.htm>) to check course announcements and access posted homework and solutions.

Important: When you 1st login into the system you must configure “My Settings” to forward course emails to your primary email account as follows:

- Step 1: Login into system
- Step 2: Click “My Settings”
- Step 3: Click “System Settings”
- Step 4: Type your PSU Email under “Forwarding Address” and set “Forwarding Mode” as shown below:

The screenshot shows a web form with two main sections. The first section is titled 'Forwarding Address' and contains a text input field with the value 'email@engr.psu.edu'. The second section is titled 'Forwarding Mode' and contains a dropdown menu with the selected option 'Forward my course mail and keep as new in course'. At the bottom of the form are two buttons: 'Save' and 'Cancel'.

Step 5: Click “Save”. You now should receive all course announcements in your primary email account as well as your ANGEL account.

Course Goals

Evaluation of Engineering Properties of soils and Theoretical Analyses to predict behavior by:

1. Identifying the basic characteristics and properties of single particles and particle systems (e.g. soils)
2. Understand the steady-state flow of water through soils
3. Understand the concept of effective stress in soils
4. Understand stress-strain behavior of soils
5. Apply soil mechanics concepts to stability and settlement analyses
6. Understand typical techniques of subsurface exploration

Course Schedule (subject to change)

Week/Date	Lecture	Topic	Reading	Assignment/Quiz
1/Jan 17	1	Introduction; Soil Deposits; Soil Composition	13-20	
1/Jan 19	2	Characteristics of Soil Particles; Soil Types	22-29; 43-44	
2/Jan 22	3	Mechanical Analysis	20-22; 30-42	
2/Jan 24	4	Mechanical Analysis cont'd Phase Relationships	49-67	HW 1 Assigned
2/Jan 26	5	Phase Relationships cont'd; Soil Structure	68-82; 82-86	
3/Jan 29	6	Soil Classification	90-103	
3/Jan 31	7	Soil Classifications cont'd		Quiz 1
3/Feb 02	8	Soil Capillarity	248-251	
4/Feb 5	9	Water Flow in Soils; Permeability	156-192	
4/Feb 7	10	Permeability cont'd		HW 1 Due; HW 2 Assigned
4/Feb 9	11	Permeability cont'd		
5/Feb 12	12	Seepage Analysis	198-209; 213-214	
5/Feb 14	13	Seepage cont'd		Quiz 2
5/Feb 16	14	Guest Speaker		
6/Feb 19-21	15-16	No Classes		
6/Feb 23	17	Effective Stress – No Seepage	227-232; 251-253	HW 2 Due; HW 3 Assigned
7/Feb 26	18	Stresses with Seepage	232-244	
7/Feb 28	19	Stresses on a Plane	258-265	Quiz 3
7/Mar 02	20	Stresses on a Plane cont'd		
8/Mar 05	21	Stresses Due to Load	265-297	
8/Mar 07	22	Stresses Due to Load cont'd		HW 3 Due; HW 4 Assigned
8/Mar 09	23	Soil Compaction	106-138	
9/Mar 12-16	24-26	Spring Break – No Classes		
10/Mar 19	27	Soil Compaction cont'd		
10/Mar 21	28	1D Consolidation	312-339	Quiz 4
10/Mar 23	29	1D Consolidation cont'd		
11/Mar 26	30	Time Rate of Consolidation	340-353	
11/Mar 28	31	Time Rate cont'd		HW 4 Due; HW 5 Assigned
11/Mar 30	32	Shear Strength of Soils	374-408	
12/Apr 02	33	Shear Strength of Soils cont'd		
12/Apr 04	34	Shear Strength Testing		Quiz 5
12/Apr 06	35	Shear Strength Testing cont'd		
13/Apr 09	36	Bearing Capacity of Shallow Foundations	601-630	
13/Apr 11	37	Bearing Capacity cont'd		HW 5 Due; HW 6 Assigned
13/Apr 13	38	Bearing Capacity cont'd		
14/Apr 16	39	Lateral Earth Pressure	436-494	
14/Apr 18	40	Lateral Earth Pressure cont'd		Quiz 6
14/Apr 20	41	Lateral Earth Pressure cont'd		
15/Apr 23	42	Lateral Earth Pressure cont'd		
15/Apr 25	43	Slope Stability Analysis	533-573	HW 6 Due; HW 7 Assigned
15/Apr 27	44	Slope Stability Analysis cont'd		
16/Apr 30	45	Slope Stability Analysis cont'd		
16/May 02	46	Subsurface Exploration	652-674	
16/May 04	47			HW 7 Due; Quiz 7