

GG454 Spring 2017

Day	Date	Topic	Lecture	Reading (Hencher)
Mon	1/8/18	Preliminaries, Course Content, General Approach, Topics		1 1
Wed	1/10/18	Rocks and their engineering characteristics I		2 1.5, 3.1-3.3.3, 5
Fri	1/12/18	Rocks and their engineering characteristics II		3 1.5, 3.1-3.3.3, 5
Mon	1/15/18	*Holiday		
Wed	1/17/18	Rock structure & discontinuities in rock		4 3.4, 3.8
Fri	1/19/18	Quaternary deposits and their engineering characteristics		5 3.3.4
Mon	1/22/18	Soils and their engineering characteristics		6 3.5
Wed	1/24/18	Earthquakes: Case histories		7 3.7.1, 3.7.3, 6.10
Fri	1/26/18	Earthquakes: Case histories		8 3.7.1, 3.7.3, 6.10
Mon	1/29/18	Seismic hazard recognition & characterization: Surface faulting		9 3.7.1, 3.7.3, 6.10
Wed	1/31/18	Seismic hazard characterization: Magnitude & intensity		10 3.7.1, 3.7.3, 6.10
Fri	2/2/18	Stress transformations		11 3.7.1, 3.7.3, 6.10
Mon	2/5/18	Stress transformations		12 3.7.1, 3.7.3, 6.10
Wed	2/7/18	Characterizing seismic sources		13 3.7.1, 3.7.3, 6.10
Fri	2/9/18	Seismic hazard characterization: Shaking & Liquefaction		14 3.7.1, 3.7.3, 6.10
Mon	2/12/18	Seismic hazard characterization: Predicting ground response		
Wed	2/14/18	Seismic hazard characterization: Response of structures		15 3.7.1, 3.7.3, 6.10
Fri	2/16/18	Paleoseismology: site selection		16 3.7.1, 3.7.3, 6.10
Mon	2/19/18	*Holiday		17 3.7.1, 3.7.3, 6.10
Wed	2/21/18	Paleoseismology: quantitative analysis		18 3.7.1, 3.7.3, 6.10
Fri	2/23/18	Case history: Teton Dam		19 3.8
Mon	2/26/18	Landslide case histories: Nevados Huascarán		20 3.7.2
Wed	2/28/18	Landslide case history: Vaiont reservoir		21 Rahn, Ch. 6
Fri	3/2/18	Landslide case history: TBA (Frank slide/Love Creek)		22 Rahn, Ch. 6
Mon	3/5/18	Case histories of landslides: Mt. St. Helens & debris flows		23 Rahn, Ch. 6
Wed	3/7/18	Landslide recognition & classification/characterization		24 3.7.2, 4.11.2
Fri	3/9/18	Landslide recognition		25 4.1-4.6
Mon	3/12/18	Landslide mechanics (Effective stress)		26 4.1-4.6
Wed	3/14/18	Landslide mechanics (Limit equilibrium analysis)		27 6.6
Fri	3/16/18	Landslide characterization		28 6.6
Mon	3/19/18	Coastal Processes: Case histories		
Wed	3/21/18	Wave mechanics: The wave equation		
Fri	3/23/18	Wave mechanics: Refraction		
Mon	3/26/18	Recess		29 Rahn, Ch. 10
Wed	3/28/18	Recess		30 Rahn, Ch. 10
Fri	3/30/18	*Holiday		
Mon	4/2/18	Wave mechanics: Reflection and diffraction		31 Rahn, Ch. 10
Wed	4/4/18	Effects of waves on coasts		32 Rahn, Ch. 10
Fri	4/6/18	Coastal hazards and risks		33 Rahn, Ch. 10
Mon	4/9/18	Fluid withdrawal and land subsidence: Case histories		34 Rahn, Ch. 10
Wed	4/11/18	Fluid withdrawal and land subsidence: Case histories 2		35 Rahn, Ch. 7,9
Fri	4/13/18	*Holiday		36 Rahn, Ch. 7,9
Mon	4/16/18	Consolidation: Subsidence Mechanics 1		37 4.11.4
Wed	4/18/18	Consolidation: Subsidence Mechanics 2 - analogs		38 Rahn, Ch. 7,9
Fri	4/20/18	Consolidation: Subsidence Mechanics 3 - numerical		39 Rahn, Ch. 7,9
Mon	4/23/18	Consolidation: Subsidence Mechanics 4 - Terzaghi's equation		40 Rahn, Ch. 7,9
Wed	4/25/18	Consolidation: Subsidence Mechanics 5 - 1-D recap		41 Rahn, Ch. 7,9
Fri	4/27/18	Consolidation: Subsidence Mechanics 6 - 2-D (Segall)		42 Rahn, Ch. 7,9
Mon	4/30/18	Subsidence hazards and risks		43 Rahn, Ch. 7,9
Wed	5/2/18	Nuclear waste disposal (Last day of class)		44
Fri	5/4/18			
Mon	5/7/18			
Wed	5/9/18			
Fri	5/11/18	Projects due at 2:00		

Assignment Schedule

Date	Topic
1/15/18	Holiday
1/22/18	
1/29/18	
2/5/18	
2/9/18	
2/12/18	
2/19/18	Holiday
2/26/18	Earthquake mechanics homework due
3/5/18	<i>Class project I due</i>
3/12/18	Landslide homework due
3/26/18	Spring Recess
4/2/18	
4/9/18	
4/14/17	
4/16/18	<i>Class project II due</i>
4/23/18	
4/30/18	Homework 3 due
5/7/18	
5/14/18	
5/11/18	<i>Class project III due at 2:00</i>