

Tentative schedule

Day	Date	Topic	Lab.
W	1/19/2022	Class introduction, syllabus, policies	Soil components
F	1/21/2022	Invited speaker: Topic TBD	
M	1/24/2022	Introduction: The geological cycle, soil origin	Grain size dist.
W	1/26/2022	Index properties: Phase relationships	
F	1/28/2022	Index properties: Grain size distribution, Atterberg limits	
M	1/31/2022	Index properties: Soil classification	Atterberg limits
W	2/2/2022	Compaction	
F	2/4/2022	Introduction to in-situ testing	
M	2/7/2022	Quiz 1: Introduction, index properties, compaction, in-situ testing	Visual classification
W	2/9/2022	Water in soils: Groundwater table, pore pressure, total and effective stresses	
F	2/11/2022	Water in soils: Darcy's law	
M	2/14/2022	Water in soils: Permeability and hydraulic conductivity	Compaction
W	2/16/2022	Water in soils: One-dimensional seepage	
F	2/18/2022	Water in soils: 2D-3D seepage, flow nets, pore pressure, uplift force, seepage force	
M	2/21/2022	President's day: no class	In-situ density
W	2/23/2022	Water in soils: piping	
F	2/24/2022	Quiz 2: Water in soils	
M	2/28/2022	Induced stress: Approximations, Bousinesq's elastic solution	Permeability
W	3/2/2022	Induced stress: Bousinesq's elastic solution, superposition	
F	3/4/2022	Induced stress: Stress tensor, elastic deformations	
M	3/7/2022	Consolidation: Oedometer test, primary and secondary consolidation	Site investigation
W	3/9/2022	Consolidation: Preconsolidation pressure, OCR	
F	3/11/2022	Consolidation: Primary consolidation parameters	
M	3/14/2022	Spring break: no class	
W	3/16/2022	Spring break: no class	
F	3/18/2022	Spring break: no class	
M	3/21/2022	Consolidation: rate of consolidation	Bonus
W	3/23/2022	Consolidation: preloading, radial consolidation	
F	3/25/2022	Quiz 3: Induced stress and consolidation	
M	3/28/2022	State of stress: 2D stresses and Mohr's circle	Consolidation
W	3/30/2022	State of stress: principal stresses, stress invariants, rotations	
F	4/1/2022	State of stress:: Usage of Mohr's circle	
M	4/4/2022	State of stress: stress paths, simple shear, triaxial compression	Settlement estimates
W	4/6/2022	Quiz 4: State of stress	
F	4/8/2022	Shear strength: Mohr-Coulomb failure criteria	
M	4/11/2022	Shear strength: drained and undrained behavior	Unconfined compression test
W	4/13/2022	Shear strength: Shear strength of clays	
F	4/15/2022	Shear strength: Shear strength of sands	
M	4/18/2022	Quiz 5: Shear strength	Direct shear
W	4/20/2022	Lateral earth pressure: at-rest, passive, and active conditions ²	
F	4/22/2022	Intro to slope stability ²	
M	4/25/2022	Intro to bearing capacity ²	Direct shear
W	4/27/2022	Maine's day: no class	
F	4/29/2022	Classes end: Q&A session	
M	5/2/2022	Final exam (1:30 PM- 3:30 PM) Williams Hall 110	

M: Monday - W: Wednesday - F: Friday

²This items may or may not be covered. It will be determined by how far the course has progressed.