



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 | Introduction: Site investigation | |
| F | 1/28/2022 | Index properties: Phase relationships | |
| M | 1/31/2022 | Index properties: Grain size distribution, Atterberg limits | Atterberg limits |
| W | 2/2/2022 | Index properties: Soil classification | |
| F | 2/4/2022 | Compaction | |
| 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