

## CEN 672 Advanced Soil Mechanics

Trimester 1/2553

Instructor : Dr.Pisit Kuntiwattanalul

Time & Place : Thursday 18.00-21.00 o., Room 5-451

Contents :

Soil formation; the nature of soils; stress within a soil mass; effective stress concept; general aspect of stress-strain behavior; shear strength of cohesionless soil; one-dimensional and two-dimensional flow; theories of compressibility and consolidation; shear strength of cohesive soil; undrained and drained shear strength of cohesive soil; creep in soft soil and critical state soil mechanics concept.

- References :
1. The Mechanics of Soils by J.H.ATKINSON and P.L.BRANSBY
  2. Soil Mechanics, SI Version, T.William Lambe and Robert V.Whitman
  3. วิศวกรรมปฐพี, ดร.สุรฉัตร ตัมพันธ์รักษ์

Teaching Schedule :

Week	Description
1-2	Soil formation ; the nature of soils
3-4	Stress in soil mass, Effective stress concept
5-6	Stress-strain behavior, Shear strength of soil
7-8	Flow of water in soil
9-10	Theories of compressibility and consolidation
11	Critical State Soil Mechanics

Evaluation

Homework/Participation	50%
Final	<u>50%</u>
Total	<u>100%</u>