

Xi'an University of Architecture and Technology

Calendar

Semester of 2022~2023

Major: 2101

Supervisor: Tao ZENG

Course Name: Soil Mechanics II

Total Hours of Instruction/Laboratory work: 36/4

Director of the Department: Zhanping SONG

No	Hours/Week	Theoretical work		Laboratory work	
		Hours	Contents	Hours	Contents
1	4	2	Chapter 0 Overview; engineering status and history of soil mechanic; course characteristics; study methods and requirements.		
		2	Chapter 1 section 1.1 and section 1.2. Overview; Formation of soils; Constitution of soils; Structure of soils		
2	4	2	section 1.3, section 1.4 and section 1.5 Physical property indices; Relative density; consistency and compressibility of cohesionless soils;		
				2	Bulk density; Plastic limit, liquid limit
3	4	2	Chapter 2 section 1.1 and section 1.2. Overview; Permeability of soils		
		2	section 1.3 and section 1.4 2-D seepage and flow net		
4	4	2	section 1.5 and section 1.6 Seepage force and related problems		
		2	Chapter 3 section 1.1 and section 1.2. Overview; Effective geostatic stress due to self-weight		
5	4	2	section 1.2, section 1.3 and section 1.4. effective geostatic stress due to water flow, contact pressure and distribution		
		2	section 1.5 vertical stress increment and related problems		
6	2	2	Chapter 4 section 1.1 and section 1.2. Overview, compressibility of soils		
	4	2	section 1.3 Oedometer test and related indices		
7	4	2	section 1.4 and section 1.5 Foundation settlement calculation; stress history		
		2	section 1.6 1D consolidation theory; ground settlement versus time		
8	4	2	Chapter 5 section 1.1 and section 1.2. Overview; Mohr-Coulomb theory.		
		2	section 1.3 and section 1.4 testing methods for strength parameters		
9	4	2	Section 1.5 Pore pressure coefficient; characteristics of triaxial compression tests		
				2	Shear strength parameters