

Vocational School / Construction Technology
2024 - 2025 Academic Year
SOIL MECHANICS
Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
SOIL MECHANICS	İNŞ2277060	Spring Semester	3+0	3	4
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Required				
Course Coordinator	Lect. Can DURMUŞ				
Name of Lecturer(s)	Lect. Can DURMUŞ				
Assistant(s)					
Aim	It is aimed to teach engineering and mechanical properties of soils, calculation of bearing capacity, calculation of soil settlement, calculation of lateral and vertical earth pressures, and soil stabilisation methods.				
Course Content	This course contains; Soil Formation,Basic Physical Properties of Soils,Soils Grain Distribution Curve,Atterberg Limits,Compaction of Soils,Consolidation of Soil,Shear Strength of Soil,Compressive Strength of Soil and Bearing Capacity,Compressive Strength of Soil and Bearing Capacity,Permeability of Soils,Vertical Earth Pressure,Horizontal Earth Pressure,Retaining Structures,Stabilization of soils.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Determine the engineering properties of soils.			14, 9	A	
Determine the mechanical properties of soils.			14, 9	A	
Determine the bearing capacity of soils.			17, 9	A, E	
Calculate the lateral earth pressure on the soil.			12, 9	A	
Verification of retaining structures.			13, 16, 9	A	
Identify the methods of soil improvement.			10, 9	A, E	
Teaching Methods	10: Discussion Method, 12: Problem Solving Method, 13: Case Study Method, 14: Self Study Method, 16: Question - Answer Technique, 17: Experimental Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Soil Formation				
2	Basic Physical Properties of Soils				
3	Soils Grain Distribution Curve				
4	Atterberg Limits				
5	Compaction of Soils				
6	Consolidation of Soil				
7	Shear Strength of Soil				
8	Compressive Strength of Soil and Bearing Capacity				
9	Compressive Strength of Soil and Bearing Capacity				
10	Permeability of Soils				
11	Vertical Earth Pressure				
12	Horizontal Earth Pressure				
13	Retaining Structures				
14	Stabilization of soils				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources
Course PresentationsKumbasar, V., Kip, F., "Zemin Mekaniği Problemleri", Sixth Edition (1999), Çağlayan Kitabevi. Yıldırım, S., "Zemin İncelemesi ve Temel Tasarımı", Third Edition (2009), Birsen Yayınevi.