



**HASAN KALYONCU UNIVERSITY**  
**Faculty of Engineering**  
**Course Description Form**

<b>COURSE:</b> Soil Mechanics 2					
<b>CODE:</b> CE362		<b>SEMESTER:</b> SPRING			
<b>LANGUAGE:</b> ENGLISH		<b>TYPE:</b> COMPULSORY			
<b>PRE-REQUISITES:</b> - <b>CO-REQUISITES:</b> -		<b>THEORY</b>	<b>PRACTICAL</b>	<b>CREDIT</b>	<b>ECTS</b>
<b>WEEKLY HOURS:</b> 3		3	0	3	4

**CONTENT OF THE COURSE:**

Consolidation theory, shear strength of soils, lateral earth pressure, gravity walls, slope stability.

**OBJECTIVE OF THE COURSE:**

To give the ability to make soil strength and settlement calculations. To give the ability to make the design of gravity walls and slopes at basic level.

**WEEKLY SCHEDULE**

<b>Week</b>	<b>Topics</b>
1	General review
2	Consolidation theory
3	Consolidation theory
4	Consolidation theory
5	Shear strength of soils
6	Shear strength of soils
7	Shear strength of soils
8	Midterm Week
9	Lateral earth pressures
10	Lateral earth pressures
11	Gravity walls
12	Gravity walls
13	Slope stability
14	Slope stability

**TEXTBOOK:** • Craig, R. F. (1997) Soil Mechanics (sixth or later edition)

**EVALUATION SYSTEM:**

<b>IN-TERM STUDIES</b>	<b>QUANTITY</b>	<b>PERCENTAGE (%)</b>
Midterm Exam	1	40
Homework	0	0
Laboratory works	0	0

Quiz	0	0
Final Exam	1	60
<b>TOTAL</b>	<b>2</b>	<b>100</b>
CONTRIBUTION OF INTERM STUDIES TO OVERALL GRADE	1	40
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	1	60
<b>TOTAL</b>	<b>2</b>	<b>100</b>

<b>COURSE CATEGORY:</b>	<b>PERCENTAGE (%)</b>
Mathematics and Basic Sciences	20
Engineering	50
Engineering Design	30
Social Sciences	0

<b>TABLE OF ECTS / WORKLOAD:</b>			
<b>Activities</b>	<b>QUANTITY</b>	<b>Duration (Hour)</b>	<b>Total Workload</b>
Course Duration	13	3	39
Hours for off-the-classroom study (Pre-study, practice)	14	5	70
Laboratory works	0	0	0
Mid-term	1	2	2
Final examination	1	2	2
Homework	-	-	-
Quiz	-	-	-
<b>Total Work Load</b>			<b>113</b>
<b>Total Work Load / 30</b>			<b>3,7</b>
<b>ECTS Credit of the Course</b>			<b>4</b>

	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>
<b>LO1</b>	3	1	0	0	3	0	0	0	0	0	0
<b>LO2</b>	3	1	0	0	1	0	0	0	0	0	0
<b>LO3</b>	2	1	0	0	1	0	0	0	0	0	0
<b>LO4</b>	2	3	0	0	3	0	0	0	0	0	0
<b>LO5</b>	1	3	0	0	3	0	0	0	0	0	0
	PO: Program Outcomes   LO: Learning Outcomes Values: 0: None   1: Low   2: Medium   3: High										

<b>INSTRUCTOR(S):</b>	Asst. Prof. Dr. Volkan Kalpakcı
<b>FORM PREPARATION DATE:</b>	22.05.2019

<b>LEARNING OUTCOMES OF THE COURSE:</b>	<b>PROGRAM OUTCOMES:</b>
<p><b>LO1:</b> Consolidation theory.</p> <p><b>LO2:</b> Strength of soils and related theories.</p> <p><b>LO3:</b> Calculation of soil strength parameters from experimental data</p> <p><b>LO4:</b> Lateral earth pressures and design of gravity walls.</p> <p><b>LO5:</b> Safe slope design at basic level.</p>	<p><b>PO1:</b> Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems.</p> <p><b>PO2:</b> Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.</p> <p><b>PO3:</b> Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.</p> <p><b>PO4:</b> Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice; ability to employ information technologies effectively.</p> <p><b>PO5:</b> Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions.</p> <p><b>PO6:</b> Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.</p> <p><b>PO7:</b> Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language; ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions.</p> <p><b>PO8:</b> Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.</p> <p><b>PO9:</b> Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice.</p> <p><b>PO10:</b> Knowledge about business life practices such as project management, risk management, and change management; awareness in entrepreneurship, innovation; knowledge about sustainable development.</p> <p><b>PO11:</b> Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions.</p>