	ADVAN	CED S	OIL MECHANICS							
1	Course Title:	ADVANO	CED SOIL MECHANICS							
2	Course Code:	INS6074								
3	Type of Course:	Optional								
4	Level of Course:	Third Cy	cle							
5	Year of Study:	1								
6	Semester:	2								
7	ECTS Credits Allocated:	6.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:									
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	ace							
14	Course Coordinator:	Dr. Ögr.	Üyesi YEŞİM SEMA ÜNSEVER							
15	Course Lecturers:									
16	Contact information of the Course Coordinator:	unsever 0224 294	@uludag.edu.tr 42946							
17	Website:									
18	Objective of the Course:	Mechani	ical background to understand and solve problems in Soil ics and Foundation Engineering areas numerically. dation theory in details considering swelling and collapsible							
19	Contribution of the Course to Professional Development: This course teaches fundamental of soil mechanics in advance									
20	Learning Outcomes:									
		1	Be able to understand soil stress and strain behaviors							
		2	Be able understand and solve stress and strain relationships in soils							
		3	Be able to calculate stresses and strains in soils.							
		4	Be able to learn consolidation theory in details							
		5	Be able to analyze consolidations and settlements in soils.							
		6	Be able to learn critical state soil mechanics							
		7								
		8								
		9								
		10								
21	Course Content:									
	Course Content:									
	Theoretical		Practice							
1	Introduction									
2	Concept of stress and strain, Princip stresses and strain; Stress- strain relationships	al								
3	Concept of stress and strain, Princip stresses and strain; Stress- strain relationships	al								

4	Spec	ial m	natrice	es, Pla	ine sti	ress, P	lane s	train										
5	distrik	butic	n in s		tress	ths, St es und		tings										
6	Mohr's diagram, Stress-paths, Stress distribution in soils, Stresses under footings resting on elastic media																	
7	Effective stress concept. Capillary phenomenon, Applications																	
8	Elastic settlement of soils, Pore pressure parameters																	
9	One- dimensional consolidation theory. Consolidation test, Secondary consolidation, Radial Consolidation																	
10	Settlement of foundations, Immediate, consolidation and secondary consolidation settlements, Skempton-Bjerrum correction.																	
11	Applications (Settlement correction for the construction period, sand drains, pre- consolidation, stress path method.)																	
12	Swelling and Collapsible Soils																	
13	Swelling and Collapsible Soils																	
14	Some applications and examples																	
Activites							IMc 	Harr, M. E., Foundation McGraw Hill. 1966.: Lar Number				l and F	hitman. Soil Total Work Load (hour)					
												3.00			42.00			
Practic									C	0						0.00		
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Others		20							C	0						0.00		
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	otal Work Load															178.00		
	Total work load/ 30 hr							100	0.00				5.93					
ECTS (Course		of th	ne Co	urse					1260	signme	onte					6.00		
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25	<u> </u>																	
23	5 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																	
		PQ1		PQ3			PQ6				PQ1	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16	
ÖK1					PQ4		PQ6 0	PQ7					PQ12 0	PQ1 3	PQ14 0	PQ15 0	PQ16 0	
ÖК1 ÖК2	P	;	PQ2	PQ3	PQ4 0	PQ5		PQ7 0	PQ8	PQ9	PQ1 0	PQ11		3				

ÖK4	5	0	4	3	0	4	0	0	0	0	0	0	0	0	0	0
ÖK5	5	4	5	4	0	5	0	0	0	0	0	0	0	0	0	0
ÖK6	5	4	5	4	0	5	4	0	0	0	4	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	ution			2 low		3 Medium			4 High			5 Very High				