COURSE IDENTIFICATION FORM

Course Code and Name: IM5053 EXPERIMENTAL SOIL MECHANICS				**Department of :** MASTER'S PROGRAM IN CIVIL ENGINEERING WITH THESIS			
Semester	**Theoretic Hour**	**Practice Hour**	**Total Hour**	**Credits**	**ECTS**	**Education Language**	**Type: Compulsory Elective**
Fall	3	0	3	3	5	Turkish	Optional
Prerequisite (s)							
Instructor		Assist. Prof. Özlem ERDEM				**Mail : osenerdem@munzur.edu.tr Web :**	
Course Assistant						**Mail : Web :**	
Groups / Classes							
Course Aim	To give information about the measurement of physical and mechanical properties of soils. To teach the basic and standard experiments performed in the laboratory in order to determine the engineering properties of soils, their evaluation and their place and meaning in foundation engineering applications. To teach how to write a soil laboratory report. To teach how to conduct experiments, collect data, analyze and interpret the results.						
Course Goals							
Course Learning Outs and Proficiencies	• - Learns how the soil behaves under stress and over time. • - Learns how soil properties are determined and the meaning and limit values of these values in terms of soil behavior. • - Can perform classification experiments. • - Determine the shear strength of the soil. • - Gains the ability to determine the compaction properties of soil.						
Course Basic and Auxiliary Contexts	• Ders Notları • Bardet, J.P., 1997, Experimental Soil Mechanics, Prentice Hall, USA. • Bowles, J.E., 1993, Engineering Properties of Soils and Their Measurement, McGraw-Hill, USA. • Das, B.M., 1992, Soil Mechanics Laboratory Manual, Engineering Press, USA.						

	• Lambe, W.T., 1969, Soil Testing for Engineers, John Wiley and Sons, USA..
Methods of Give a Lecture	Lecture, Discussion on case studies, Demonstration (telling and doing by showing, making the student do it)

Assessment Criteria		**If Available, to Sign (x)**	**General Average Percentage (%) Rate**
	1. Quiz	**X**	**50**
	2. Quiz		
	3. Quiz		
	4. Quiz		
	5. Quiz		
	Oral Examination		
	Practice Examination (Laboratory, Project etc.)		
	Final Exam	**X**	**50**

Semester Course Plan

Week	Subjects
1	Introduction; Basic Definitions. Soil Samples, Laboratory Report
2	Water content, liquid, plastic and shrinkage limit tests.
3	Determination of liquid limit by falling cone test.Preparation of samples for sieve analysis.
4	Sieve analysis and hydrometer test.
5	Student presentations
6	Specific gravity and relative firmness tests
7	Compaction-Standard Proctor Test and California Bearing Ratio (CBR) Test
8	MIDTERM EXAM
9	Consolidation tests. Falling and constant level permeability tests.
10	Consolidation tests. Falling and constant level permeability tests.
11	Shear Box test
12	Free pressure test

13	Triaxial (UU) Experiment. Establishment of CU experiment.
14	CU experiment saturation control, CU experiment construction.