

COURSE IDENTIFICATION FORM

Course Code and Name: IM5040 CAUSES OF STONE DETERIORATION IN BUILDINGS AND STONE ANALYSIS

Department of: CIVIL ENGINEERING / MASTER'S DEGREE PROGRAM 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		Prof. Dr. Murat Dal				Mail : muratdal@munzur.edu.tr Web :	
Course Assistant						Mail : Web :	
Groups / Classes							
Course Aim		The process of preservation and restoration of historical buildings is the continuation of stone materials, technology and usage techniques in traditional buildings, Physical, chemical, petrographic and technological tests of different stone materials in historical buildings, evaluation of analysis results and development of new solution suggestions.					
Course Goals							
Course Learning Outs and Proficiencies		Can recognize stone building materials, Knows the analysis of stone building materials, Knows the physical, chemical and mechanical properties of stone building materials. Knows the physical properties of stone building materials. Knows the chemical properties of stone building materials. Knows the mechanical properties of stone building materials.					
Course Basic and Auxiliary Contexts		- Doğal Taşlardaki Bozunmalar, Yrd.Doç.Dr. Murat DAL, Mimarlık Vakfı İktisadi İşletmesi, 2012. - Malzeme Bilimi, Prof. Dr. Kaşif ONARAN, Bilim Teknik Yayınevi, 1993. - Malzeme Bilimi Prob. ve Çözümleri, Prof. Dr. Kaşif ONARAN, Bilim Teknik Yay, 1993. - Malzeme Bilimi Ders Notları, Prof. Dr. Ferruh KOCATAŞKIN, İ.T.Ü. İnş. Fak. Matbaası.					

	- Cisimlerin Yapısı ve Özellikleri, Prof. Bekir POSTACIOĞLU, İ.T.Ü. Yayını, 1981. - Malzemelerin Yapı ve Özellikleri, Cilt I, İç Yapılar, Cilt III, Mekanik Özellikler, Yazarlar: Moffatt, Pearsall ve Wulff, Çevirenler: K. Onaran ve B. Erman, İTÜ Yayını, 1982 ve 1978. - Civil Engineering Materials, Ed. N. Jackson, 1984. - The Nature and Properties of Engineering Materials, Zbigniew D. Jastrzebski, 1987.
Methods of Give a Lecture	Lecture, research, observational and experimental studies

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	Knowing traditional stone building materials, technologies and techniques in the process of preservation and restoration of historical buildings		
2	Knowing traditional building materials, technologies and techniques in the process of repairing historical buildings		
3	Determining restoration intervention decisions by analyzing the structural details and other features (restitution, damage assessment, material analysis) of traditional building materials in the process of preservation and restoration of registered cultural assets and historical buildings with different regions, periods and architectural functions.		
4	Determining the type of stone in historical buildings belonging to periods and regions, physical properties of stone building materials,		

5	Chemical properties of stone building materials in historical buildings belonging to periods and regions,
6	Mechanical properties of stone building materials in historical buildings belonging to periods and regions,
7	Classification of stone types used in historical buildings
8	Midterm Exam
9	Mechanical breakdowns
10	physical impairments
11	chemical degradation
12	Petrographic degradation, Biological degradation
13	Mapping the degradations on the structure
14	General Exam-Presentations