

Vocational School / Construction Technology
2024 - 2025 Academic Year
CONSERVATION
Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
CONSERVATION	İNŞ2177010	Fall Semester	3+0	3	4
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Elective				
Course Coordinator	Assist.Prof. Berk KESKİN				
Name of Lecturer(s)	Assist.Prof. Berk KESKİN				
Assistant(s)					
Aim	To learn repair and reinforcement of the materials used in architectural structures.				
Course Content	This course contains; 1.h: Introduction, course aims,2.h: Fundamentals of conservation,3.h: Masonry building elements: stone-based materials (walls, vaults, domes, roof elements),4.h: Deterioration of Stone based material,5.h: Prevention methods in stone-based materials,6.h: Masonry building elements: Clay-based materials,7.h: Deterioration of the clay-based materials and methods of protection (tile, brick, sandstone, etc.),8.h: Architectural metals and alloys,9.h: Corrosion of metals and alloys,10.h: Fundamentals of electrochemical corrosion,11.h: Types of corrosion and protection methods,12.h: Woods, wood's microstructure and properties,13.h: Mechanical properties of wood, biological and mechanical breakdowns,14.h: Repair and protection methods in wood building materials.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. Explain conservation methods.			13, 16, 9		
2. Interpret the masonry structure elements(stone, clay, wood) and their conservations.			13, 16, 9		
3. Interpret conservation of architectural metals and alloys.			13, 16, 9		
Teaching Methods	13: Case Study Method, 16: Question - Answer Technique, 9: Lecture Method				
Assessment Methods					
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	1.h: Introduction, course aims				
2	2.h: Fundamentals of conservation				
3	3.h: Masonry building elements: stone-based materials (walls, vaults, domes, roof elements)				
4	4.h: Deterioration of Stone based material				
5	5.h: Prevention methods in stone-based materials				
6	6.h: Masonry building elements: Clay-based materials				
7	7.h: Deterioration of the clay-based materials and methods of protection (tile, brick, sandstone, etc.)				
8	8.h: Architectural metals and alloys				
9	9.h: Corrosion of metals and alloys				
10	10.h: Fundamentals of electrochemical corrosion				
11	11.h: Types of corrosion and protection methods				
12	12.h: Woods, wood's microstructure and properties				
13	13.h: Mechanical properties of wood, biological and mechanical breakdowns				
14	14.h: Repair and protection methods in wood building materials				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources
There are presentation which are prepared from various sources.1) John Ashurst, Francis G Dimes, "Conservation of Building and Decorative Stone", 2nd Edition, Butterworth Heinemann, 1998 2) Kemal Kutgün Eyüpgiller, Lory Zakar, "Mimari Restorasyon Koruma Teknik ve Yöntemleri", Yapı Endüstri Merkezi Yayınları, 2015 3) Uluengin, M. B., "Mimari Metaller Özellikleri, Bozulma Nedenleri, Koruma ve Restorasyon Teknikler", Birsen Yayıncılık 4) Reha Günay, "Geleneksel Ahşap Yapılar Sorunları ve Çözüm Yolları", Birsen Yayıncılık, 2002 5) Ayşe Gülçin Küçükaya, "Yapı Taşlarının Restorasyonu", Yazarın Kendi Yayını, 2014. 6) D. A. Jones, "Principles and Prevention of Corrosion", 2nd ed., Prentice-Hall, 1996